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ABSTRACT

This collection contains the 30 papers presented at the 1979 Reading Center Conference on content area reading held at West Virginia University. The papers are presented under the following topics: aiding reading/thinking skills, reading in specific content areas, motivating extended reading, meeting student needs, and administering content area reading programs. (RL)

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CONTENT AREA READING

Proceedings of the 1979
Reading Center Conference

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West Virginia University
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CONTENT AREA READING
Proceedings of
West Virginia University

Reading Center Conference

June, 1979

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Content Area Reading

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THE ASSOCIATE PASSAGE AND SELECTED GRAPHIC AIDS TO INDUCE THEMATIC CONCEPTUAL LINKAGE

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Researchers have investigated various instructional methods which foster the conceptual development and transfer of content learning. What students bring cognitively to the printed page has a great effect on the ease or difficulty they experience in reading. The cognitive level, degree of experiential background, and mental arrangement of concepts they possess prior to reading determine what is gained during reading. This paper is designed to relate the theoretical models of Ausubel, Bruner, and Piaget into a procedure for teachers to use to develop students' thematic conceptual linkages during the course of a unit of study as well as to help them develop linkages across different units of study.

Space does not permit an in-depth discussion of each model. At the expense of being overly simplistic, it can be generalized that Ausbel's advance organizer is a reception-oriented approach in that the teacher is the prime structurer in the incorporation of meanigful learning material. Bruner's model of "discovery" or "concept attainment" is a structured approach that guides the student through a learning exercise in which the generation of information is promoted by the exercise and by student discovery and discussion. Piaget's developmental model consists of "fixed" stages of intellectual development through which an individual progresses. These developmental stages are "fixed" only in the sense that each child goes through each stage sequentially. The ages attributed to each stage are based upon a norm, and, therefore, each stage can be reached earlier or later than the chronological age indicated depending upon the individual's level of experiences and intelligence.

Written overviews and summaries comprise the prevalent introductory methods in units and chapters of study within content textbooks. Ausubel (1960, 1968, 1978) has taken exception with the notion that written overviews and summaries are equivalent to advance organizers. Ausubel (1968, p. 148) defines an advance organizer as "appropriately relevant and inclusive introductory materials ... introduced in advance of the learning material ... presented at a higher level of abstraction, generality, and inclusiveness ... than the learning material itself." The purpose of the organizer is to serve as an "anchoring" force for the learning passage. Ausubel (1968) feels that prior conceptual awareness of the learner is brought to potentially new meaningful material, and that the organizer serves as a "bridge" between the learner's present knowledge and the knowledge to be gained from the learning passage. Summaries and overviews are distinguished from advance organizers in that they are "ordinarily presented at the same level of abstraction, generality, and inclusiveness as the learning material itself" (Ausubel, 1968, p. 148). and they are effective due to the delineation of specific detail (Ausubel, 1968, 1978). Other investigators have used Ausubel's advance organizer concept and have developed structured overviews or outlines to enhance conceptual organization within the learner (Barron 1969, Earle, 1969, Earle and Barron, 1973; Estes, Mills, and Barron, 1969; Glynn and DiVesta, 1977.

There are important educational implications to be derived from Piaget's developmental stage model (see Joyce and Weil, 1972). Sigel (1969) suggested that the educator, familiar with these developmental stages, can use these indices to incorporate lessons that permit appropriate assimilations and accommodations to the learners developmental and intellectual levels. While it is agreed that matching the prepared lessons to the appropriate intellectual level of the student is not a simple procedure (particularly at the formal operations level), the notion must not be dismissed as being theoretical and impractical (see Sigel and Hooper, 1968). There are interesting and practical educational implications to be derived from the Piagetian model, and further research may yield more promising results.

The associate passage can take the form of either an advance organizer, a written or structured overview, a structured outline, or an advance summary prior to an assigned reading. The purpose of the associate passage is to establish a thematic conceptual framework within a lesson of a unit or chapter of study. The associate passage is used in conjunction with (1) visual aids -- pictures, tables, graphs, charts, maps, diagrams, and cartoons, (2) written exercises, and/or (3) listening exercises (e.g., comparing/contrasting presidential inaugural addresses recorded on tapes, records, etc.). The associate passage together with these aids and exercises form a thematic conceptual linkage between previous, present, and/or future areas of study. The theme, based upon the content objective of the prepared lesson, is determined by the teacher.

The abbreviated exercise which follows was part of a study guide that was designed for a seventh grade social studies class. The thematic concept of poverty was examined within the overall chapter. The assigned reading of the subsection consisted of three pages describing poverty in the Unites States and included a chart of family incomes and a cartoon depicting an economically deprived family setting.

____

ASSOCIATE PASSAGE

Poverty is widespread among all nations and cultures. The effects of poverty vary in degree dependent upon the economic stability of a nation. Historically, economics have fluctuated among and within nations, cultures, and peoples.

READING ASSIGNMENT

Read pages 231-233.

GUIDED EXERCISE

The cartoon on page 233 and other identified sources will be used to PARTS I, II, III, and IV.

PART I - DIRECTIONS: Place a check mark before each statement with which you agree and which can be supported from the assigned reading. Add at least one (1) statement which you can support.

1. This family seems to fall within the range of the defined poverty level.
2. There are at least four (4) members living in this family.
3. Increasing fuel costs affect this family more so than an urban family.
4. Poverty does not discrimate between ethnic and age groups.
5. The war on poverty can be conquered by providing more jobs and increasing wages.

PART II - DIRECTIONS: Use the chart on page 231 to answer the following statements.

1. List the income bracket in which you would classify this family.

____

2. List the percentage in which this family would be categorized.

____

PART III - DIRECTIONS: Carefully examine the cartoon displayed on the screen, and answer the following statements.

1. Using the chart on page 231, list the income bracket which you feel best reflects this family.

____

2. Using your answer in PART II, number 1, and your answer to the above statement, the difference between the two sums is:

____

PART IV - DIRECTIONS: Using the cartoon on page 233, list at least four (4) similarities that can be made with this one family as compared to any one (1) of the underdeveloped countries previously studied in Chapter 3.

____

In this exercise students were provided with an associate passage that was general in scope and acted as a thematic conceptual linkage with the assigned reading and the guided exercise that followed. The thematic concept (poverty) linked the present with the past areas of related study. The study guide referred the learner to the chart and cartoon and required him/her to make judgments and draw implications, and it related prior learning of economic countries to the conceptual theme. The study guide could have been constructed to include future predictions along the same thematic concept. The study guide incorporated the principles and levels of comprehension advocated by Herber (1970, 1978) in accordance with Bruner's guided instruction approach.

Teachers are involved with students of varying intellectual abilities and developmental stages. As a result, theoretical models such as Ausubel, Bruner, and Piaget need to be incorporated into the classroom in the form of working exercises constructed by the teacher to meet individual student needs.

The associate passage, proposed in this paper, in conjunction with visual aids and written or listening exercises forms a thematic conceptual linkage between previous, present, and future areas of related study. The teacher has the responsibility of (1)selecting a prevalent concept in an assigned reading, (2) formalizing a content objective for the lesson, and (3) joining the associate passage to the visual aid, written or listening exercise to induce a thematic conceptual linkage through guided study.

Conceptual enhancement within the learner can occur by introducing an associate passage, matching the curriculum materials to the learner's intellectual level, and using guided instruction to actively engage the student in the learning process.

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LITERACY IN THE CONTENT AREAS:
EXPANDING STUDENT'S THINKING

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Content area teachers are neither educated to teach reading nor are they psychologically oriented to do so. Their primary goal of professional growth should be the improvement of their content teaching.

It is, however, well within the background, training, and psychological make-up of today's content teacher to promote literacy. As practiced today, there is a definite difference between teaching reading and teaching literacy. Literacy involves the development of all communications skills: listening, speaking, reading, and writing. It is impossible to define the competent content teacher as not being, at least indirectly, concerned with and promoting all these communication skills as part of content instruction.

However, we need more and more teachers who are actively aware of and involved in teaching literacy--in promoting through instruction, all the communication skills. To do this, teachers must promote the expansion of students' perceptions--the development of thinking skills. In doing so, the teacher will also help to promote the development of vocabulary and comprehension as they relate to all of the communication skills.

The Learner

In order to relate sucessfully to the learner, there are a number of important factors that must be recognized. All are included in the concept of "entering behavior" found in a teaching model developed by Robert Glaser (9162) as follows:

ENTERING BEHAVIOR ______________________ INSTRUCTIONAL OBJECTIVES

INSTRUCTIONAL PROCEDURE ______________________ PERFORMANCE ASSESSMENT

All four components are interrelated and interdependent. Each must be considered in dealing with the other three if teaching is to be efficient.

Entering behavior consists of the student's abilities, knowledge, attitudes, and skills--all that makes that person what she/he is, relevant to a new learning situation. Among the key characteristics are the aspects of self-image, correctness, and experience.

Self-Image

Youngsters usually see the self as a dependent personality--dependent upon adults (teachers) to make the decisions. This trait does not usually manifest itself strongly or continually in successful learners. However, we must be prepared to find and deal with this dependency. We find many students who have a relatively poor self-image, expressed in terms such as "feeling stupid" or "dumb" about school work, and exhibited through behaviors such as often refusing to participate in class or saying such things as "my answer is no good."

The instructor must be able to encourage a more positive attitude of self, if academic growth is to occur.

Correctness

Children learn through their experiences (with adults) that there is always a "correct" answer to problems. Somewhere, in the back of a book, or from some other authority, children learn they can verify the correctness of a problem's solutions. However, the problems faced daily by people generally have no single, verifiable answer in the back of the book. The student should learn that there are often many answers, all of which may be correct or appropriate in some way, depending on the situation.

In developing literacy skills with students, there are times when we must accept, respectfully, several different responses to a given problem. At other times, we need to indicate that a particular problem does require a better, single response. There are also times when the student requests a single, correct response where no one response is appropriate. Each of these situations must be handled carefully to maintain and support positive self-image. For the most part, the broader concept of correctness should be reinforced, as it is realistic and supports the individuality of the student.

Experience

Obviously, students come to the learning situation with a wide variety of educational and personal experiences. All of these experiences have an effect on the relative maturity of students and on the manifestation of their "intelligence" or wisdom. The teacher needs to show respect for students' wisdom gained from experience and encourage them to rely on it whenever appropriate.

Common Basic Skills Needing Development

Thinking/Perception Skills

Of major concern are perception and apperception--the reception of stimuli through the senses and how the mind deals with those stimuli. In problem-solving situations relative to perception and apperception, individuals are either "point" or "line" integrated. Line integrated persons proceed to solve in a straight line of attack and, finding hindrance to frontal attack, get bogged down and defeated. Point integrated persons begin to solve and, finding hindrances, attack the problem from different perspectives or points. The two approaches are somewhat comparable to "tunnel vision" and "panoramic vision." An important goal in literacy development is to help students develop toward the broader point integration perspective.

Vocabulary Development

The building of content vocabulary is a developmental process and is achieved by constant exposure to appropriate new words. That exposure must be periodically accompanied by instruction and the use of various word attack methods, such as simple phonic skills and the use of context in various ways to identify and recognize words.

Comprehension Development

Learners often lack any specific techniques to find the main idea of a passage. They also confuse the difference between re-statement and interpretation of a passage which compounds the problem. If students are asked to define or restate a brief passage, the response is often an example. At other times when an example is required, the response may be an explanation.

Students need definite instruction with the four sequential levels of comprehension: translation, interpretation, evaluation, and prediction. These levels involve the ability to comprehend the lines, between the lines, and beyond the lines in reading or listening situations. These abilities are crucial to the content student and will be discussed in detail later.

Reading Rate Development

Invariably, there are students who have slow and apparently inflexible reading rates. Speed techniques are easy to utilize; the problem lies in the breaking of old habits and the creating of necessary flexibility. Students, to improve, must have it exhibited to them intellectually and practically that changes in speed and flexibility are realities. Students must also be prepared for the psychological battle and the possible anxiety that may result in trying to change old and firmly ingrained reading processes.

The development of all of the above mentioned areas contains obvious overlapping concerns. Learners need to be informed continually about the processes of literacy, reasons for particular practices and possible results of application. Students should be involved in the evaluation of the appropriateness of technique application and results, and in record keeping and assessment or performance in all activities relative to literacy development. To do so is to treat students as "adults"--responsible and respected. The final concern is the nurturing of self-image along with the basic skills.

Instructional Techniques and Materials

Expanding Reading Rate Skills:
The P.I.R.S.E. Technique

Readers generally attack all reading tasks at much the same rate of speed. This lack of flexibility is compounded by lack of any systematic approach to reading tasks. This writer has developed a technique called P.I.R.S.E. which has been used with much promise in content classes.

Students should understand that reading speed can be flexible according to the purpose of the reader before they become involved in using the P.I.R.S.E. technique.

As outlined below, P.I.R.S.E. is simple and has a number of residual benefits for total literacy development.

P- Preview material to be read by scanning for a general impression of format and content, skim for unknown vocabulary and become familiar with it, read all graphics and their captions, note italics and other iconics, particularly bold-faced headings.

I- Interrogate the author by forming one written question from each bold-faced heading.

R- Read the material quickly only to find the answers to the previously formed questions. Write very brief answers.

S- Summarize each bold-faced section with a written one sentence statement of the main idea.

E- Evaluate oneself by using the developed written outline. Read the original question while covering all remaining notes. Answer mentally without referring to the developed format. Then look to see if the answer is appropriate. If correct, proceed to the next question; if not, refer back to see where comprehension broke down.

The following written format will help students develop skill with the technique. When mastered, it may be done mentally.

Preview	-New terms and explanations are written out here.
Interrogate	-Q1 question is written
Read	-A1 brief answer is noted
Summarize	-S1 single summary sentence is written

Through the use of the PIRSE technique, students receive practice in developing several skills including outlining, note-taking, and refining and expanding their vocabularies. Students learn to form questions which are to the point and well structured They learn to write brief, concise answers and well stated main ideas. As students refine the technique, they will find that they are remembering more of the content beyond the specific answers they were seeking. This residual learning grows with use of procedure. Comparison and discussion of PIRSE assignments can help develop listening and speaking skills, and also promote broader views of correctness.

With patience and proper sequential instruction, students with reading skills ranging from fourth grade to college can learn the PIRSE technique and benefit from the residual learning that results from using the technique.

Expanding Perception and Apperception with Graphics

An effective way to get individuals to think in a literate situation is through the use of visuals that present combinations of graphic and orthographic problems. Use of analogies and other word-picture problems can be incorporated here.

The visual problems may range from relatively easy ones to difficult ones in any given instructional session. Working from simple to more complex problems, the students are guided to demonstrate collectively a number of solutions possible for particular problems, thereby learning about alternatives and their strengths and weaknesses. In each case the responding students must support their answers with reasons for selection and appropriateness. Discussion and the more "adult" concept of correctness are emphasized here. Logic and point integration should be encouraged.

Example:

Figure 1----$\frac{\text{Birth}}{\text{Life}} = \frac{\rule{1.5cm}{0.4pt}}{\text{Day}}$

Which word fits the blank? Morning--Week--Sunrise. Why?

Figure 1: The response may be "morning" if someone perceives morning beginning of the day as birth begins life. Or the response may be"sunrise" if one perceives it as the event that begins the day compared to "birth" as the event begins life.

Expanding Vocabulary Through "Saturation"

If vocabulary knowledge is to be expanded, the student must be immersed in language that reinforces learning of new terms. In saturation, the new terminology is presented to students in many different ways and contexts over a period of time. Terms are introduced, explained, discussed, and used in context. Then students may work with the terms in word finders, word scrambles, crossword puzzels, in cloze sentences (Burmeister, 1976) and malapropisms. Other techniques include locating words within new words, forming many words from the letters of a new word, and creating euphemisms for selected new words. Students may also try "transformations" whereby changes are made in a stimulus word through a sequence of directions until a new word is formed (Schachter, 1974). According to Alexander and Burns (1974) exercises in etymology are also helpful. Exercises in syllabication can help develop phonetic and structural analysis skills. Collectively, all of the above examples assist in developing not only sight vocabulary development, but word attack skills in general. The crucial factor is the intense and varied involvement in the vocabulary. That involvement in the "something for everyone" approach will insure maximum learning and retention of specialized content vocabulary and concepts.

Expanding Comprehension Through T.I.E.P.

This writer has developed an activity which has shown itself to be effective in developing the four levels of comprehension--(T.I.E.P.) translation, interpretation, evaluation and prediction.

Translation involves ability to accurately re-state a message without inferring. Interpretation requires inferring meaning into message, using apperception skills to say what the message means in light of one's experience and subjective factors. Evaluation consists of making judgments about a message regarding its validity, quality or worth. Finally, prediction involves relating the meaning of the message to life and experiences beyond the message. The whole process is akin to comprehending the lines, between the lines and beyond the lines.

To help develop the four levels, one may begin by presenting students with a simple quote from Menchen (1962): "A woman's hair is long, but her tongue is longer." Students are requested to translate or restate the quote. Most will offer an interpretation, rather than a literal restatement.

In using a total procedure for student response, practice and discussion, the following format and examples might be typical:

Given by
teacher: Original:

"A woman's hair is long, but her tongue is longer."

Filled in by
Student: Translation:

Women have long hair, but longer tongues.

Interpretation:

Women with long hair talk too much.

Evaluation:

There is no validity to the statement, no basis for the hair length to indicate talkativeness.

Prediction:

Such a statement would understandably be offensive to women.

A modification could be original, translation, interpretation and example(s).

Original: The universe is in a perpetual state of flux.

Translation: The universe is in a constant state of movement.

Interpretation: The world around us is always changing.

Examples: Day becomes night and so on. The earth constantly rotates.

The content area textbook offers possibilities which may be more appropriate to the situations.

Conclusion

All students are in various developmental stages of their literacy growth. Even those who may lag in their literacy development are not usually remedial or clinical cases. They are people who stopped at a particular point in their literacy development and grew little beyond that point through lack of proper stimulation. Such students need instruction which can "plug-in" where they are developmenttally, and stimulate growth from that point. This means a need for variety in materials and techniques and concern for their appropriateness to students thinking and individual needs.

Instruction that offers variety, draws on students' experiences and promotes positive self-image has the very best chance for instructor and student success.

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THREE-LEVEL COMPREHENSION GUIDES AS AIDS IN CONTENT AREA TEACHING

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Although content area teachers tend to recognize the importance of reading ability in gaining knowledge and understanings in the content areas they teach, their teaching practices do not always reflect these beliefs. A survey by Rieck (1978), indicated that many teachers make less use of reading in their classroom instruction and evaluation then their verbal comments would indicate. Thirty-three of thirty-four teachers interviewed said they required reading in their courses. However, more than 75% of the students in their classes reported that they did not read assignments, as tests covered materials covered in class rather than in reading assignments. If this practice were to escalate over a period of time, one might speculate on a graduation ceremony in which high school diplomas were necessarily presented on tape, accompanied by tape recorders.

In secondary content area classrooms where the range of reading abilities may vary from lower elementary to college levels, it is understandable that teachers would become frustrated when all students are expected to read from the same textbook. It is also understandable that content area teachers would tend to resent the idea of "teaching reading in the content area classroom" as an unwarranted burden, unless it could be indicated that the efforts they made would directly contribute to more effective learning by students of content area concepts.

Although these are real problems and there are no "magic" solutions, guides prepared by the teacher, which students use in locating and reacting to information in text or other written materials, can be a real aid in coping with and promoting both reading skills and conceptual understandings in content area classrooms. In Teaching Reading in Content Areas,(Herber, 1978), principles, ideas, and examples are presented relative to the designing of guides in small groups can respond and react to by finding and defending the portion in the textbook which supports their response.

In the Herber text, three types of guides are discussed in depth. The first type is a three-level comprehension guide which is designed to aid students in grasping what the material "says", what it "means" and how it can be used (literal, interpretive, and applied levels). The second, which builds on the first basic type, is referred to as an organizational pattern guide, and involves the students in responding to cause/effect, comparison/contrast and other organizational patterns. Reasoning guides, the third type, are designed to encourage the student to think over issues and problems before, as well as during and after the reading.

In this paper, discussion will focus on the basic guide, the three-level reading/study guide. Although many of the ideas will reflect the contribution of Herber and associates from Syracuse University, it will no doubt also reflect the experiences of the authors in designing and using, and aiding teachers in designing and using, three-level study guides.

Description of Three-Level Study Guides

Three-level reading/study guides are designed by the teacher to give students practice in locating and responding to text-type materials at the literal, interpretive, and applied levels of comprehension. The teacher selects material that he or she feels is important in view of the teaching goals for the particular lesson or unit. Terms important to the concepts being taught are isolated so that the teacher can assess student knowledge of them and give instruction as needed. Decisions should be made as to concepts that are particularly important for students to understand, and which activities are needed to build and reinforce background. The items designed for the guide are selected to promote interaction with an understanding of these concepts. Determination of whether an item should be presented at the literal, interpretive, or applied level should be based on the information itself, its importance, and how it can best be conveyed.

In designing the items, statements rather than questions are used because Herber feels that statements help students use the skills needed for building independence in responding to and mentally organizing the materials at the three levels of comprehension. Questions, on the other hand are felt to be "assumptive" in that they imply that the student already knows how to organize his reading and thinking when dealing with written materials. Herber feels that questions, important as they are in teaching, are best used for reinforcement following the initial reading/study of the material. (Herber, 1978, pp. 194-199).

The first set of items, those at the literal level, are designed so they can be directly located in the text, either in the same words or in paraphrased fashion. Students are usually asked to check those items that indicate "what the author says." The second set of items, those at the interpretive level, are also based on information that can be directly referred to in the text, but reasoning and/or interpretation are necessary to make the connection. The student is directed to check those items which indicate "what the author means."

Although some items, with careful reading, can be agreed upon by most students, others could be supported in more than one way. Divergent, as well as convergent thinking, can be encouraged but students must be able to defend their position on the basis of information in the text material. The third level of statements, the applied level, is designed to involve the student in reacting to generalizations, such as proverbs or trite sayings, and transforming the ideas presented to those in the selection (more typical in the social sciences), or in problem solving (more typical in math and sciences).

Suggested student use of the guides involves small group interaction on each item at each level (Herber, 1979, p. 196). Students attempt to resolve differences by consulting the text; unresolved differences may be further considered by the class as a whole.

Example of a Three-Level Study Guide

(Based on The Martian Chronicles by Ray Bradbury)

I. Check those statements below which indicate what is said in the story. For discussion purposes, indicate the pages and paragraph numbers that support your choices.

Response Page and Paragraph

______ ______ 1. Benjamin wandered over Mars for thirty days planting seeds.

______ ______ 2. Benjamin could expect enthusiastic support and sympathy for his project from the other Martian colonists.

______ ______ 3. The trees grew overnight.

______ ______ 4. Benjamin's body adapted to the thin air on Mars.

______ ______ 5. The Martian soil was rich and fertile.

II. Check the statements that you feel indicate meanings intended by the story. For discussion purposes, indicate the pages and paragraph numbers that support your choices.

Response Page and Paragraph

______ ______ 1. The threat of possibly having to leave Mars provided Benjamin with great deal of motivation to accomplish his project.

______ ______ 2. Benjamin was one of the earliest colonists.

______ ______ 3. Benjamin approached his project with complete confidence in his ultimate success.

______ ______ 4. Plant life had once flourished on Mars.

______ ______ 5. The "new" oxygen would be happily greeted by the Martian colonists.

III. Check the statements which you feel can be applied to the story. Be ready to defend your answers.

______ 1. Simple pleasures are often irreplaceable.

______ 2. Possibility of failure is a minor consideration in establishing one's goals.

______ 3. Nothing takes the place of persistence.

______ 4. Dreams and hopes for the future can sustain one's efforts in times of discouragement.

______ 5. No obstacle is too great to overcome in achieving one's goal.

Discussion of the Example

The preceding example of a three-level study guide has been designed to accompany "December 2001: The Green Morning," a short story found in Ray Bradbury's The Martian Chronicles (New York: Bantam Pathfinder Editions, 1972, pages 73-77). In this story, Bradbury presents the solitary struggle of Benjamin Driscoll, a Martian colonist who establishes a simple and direct mission for his stay on Mars: to plant trees, which he perceives as a source of life-sustaining oxygen and soul-satisfying pleasure for future colonists. With troubling doubts and high hopes, Benjamin labors for thirty days with no results. One night, however, torrential rains begin to fall and Benjamin's sprouts and seeds miraculously grow overnight into mature trees. Using this brief summary as an indicator of the story's significant points, it is now possible to discuss selected items in the sample three-level study guide.

On the first level, statements are designed to allow students to check their literal comprehension of the story. The information in literal level statements is directly drawn from the text itself without interpretation. Thus, these statements can be accepted or rejected by citing specific text passages. Item four, "Benjamin's body adapted to the thin air on Mars," is a literal level statement which can be accepted by citing the following lines from the story: "He felt his rib cage. In thirty days, how it had grown" (page 74). While this statement is directly supported in one text passage, it is also possible to include literal level statements that are supported at more than one point in the text. This is the case with item five, "The Martian soil was rich and fertile." Support for this statement is located at two points in the text: "There was no guessing what mineral wealth hid in the soil, untapped because the old ferns, flowers, bushes, and trees had tired themselves to death" (page 75); and, "...he thought of the rich, inky soil, a soil so black and shiny it almost crawled and stirred in your fist, a rank soil from which might sprout giant beanstalks..." (page 76). Students could cite either or both of these passages to support their acceptance of this statement.

Each of the sample literal level statements just given is clearly supported by the text itself. To promote variety and to encourage careful reading of the text, it is also advisable to include statements that are not supported by the text. Item two, "Benjamin could expect enthusiastic support for his project from the other Martian colonists," is not supported by the text. Students could justify their rejection of this statement by citing this passage: "I'm afraid, since these first towns are mining communities, there won't be much sympathy for your tree planting---" (page 75). At the literal level, then, support for acceptance or rejection of a statement rests in the text itself, in the author's exact words.

The second level in a study guide is the interpretive level. Statements on the interpretive level require students to infer the author's meaning from context. At this level, as at the literal level, students are expected to justify their choices by citing appropriate text passages. It is important to remember, however, that the general sense of a passage, rather than a specific citation, will often provide sufficient evidence to accept or reject a particular statement. Item five, "The 'new' oxygen would be happily greeted by the Martian colonists," is supported by a specific part of the text. This statement, while not representing the author's exact words, does capture the essence of this text passage: "In a moment the town doors would flip wide, people would run out through the new miracle of oxygen, sniffing, gusting in lungfuls of it, cheeks pinking with it, noses frozen with it, lungs revivified, hearts leaping, and worn bodies lifted into a dance" (page 77). Students would be required to infer the author's meaning from this part of the story and could therefore accept the statement.

The interpretive level can also include statements which are not supported by the text, as is the case with item two. "Benjamin approached his project with complete confidence in his ultimate success." No support for this statement is found in the story, for Benjamin continually questions the possibility of success. Benjamin's questioning actually serves as an important dramatic contrast to his dogged efforts to plant trees. Moreover, the statement is particlularly contradicted by these words: "Perhaps his entire campaign, his four weeks of bending and scooping were lost" (page 76). Students could infer, from the context in general and from the quoted lines, that the author did not intend to imply Benjamin's confidence in the ultimate success of his project.

As these two sample statements demonstrate, interpretive level statements may or may not be supported by the text itself, either through specific text references or through the general sense of a passage. On the interpretive level, however, another possibility exists. To challenge students' inferential skills even more, statements can be included that can be accepted or rejected, depending on the text passages cited. Item two, "Benjamin was one of the earliest colonists," is an example of this kind of ambiguous statement. This statement would be accepted if the following lines are offered as support: "It would be months, if not years, before organized planting began" (page 75). This sentence, because of its reference to "months, if not years," would seem to support the contention that Benjamin was among the first Martian colonists. An earlier phrase in the story, however, casts some doubt. Benjamin reflects on his being on Mars and wonders how he, "like a thousand others" (page 74), will adjust to a colonist's life. "Like a thousand others" could be interpreted to mean that Benjamin had been preceded by many other colonists; hence, the statement would not be supported by the text. Interpretation here seems to hinge on the word "earliest." Inclusion of statements that can be interpreted in diverse ways can certainly add to the challenge of working with a three-level study guide. Intentionally ambiguous words or phrases can also contribute to lively discussion as students argue for and support their own interpretations of text passages.

The third level of a study guide is the applied level, in which students are asked to consider statements that extend beyond the text itself. Often in the form of generalizations, proverbs, or aphorisms, these statements are accepted or rejected with justification from the text and from the students' own knowledge, experience, and ideas. Because statements on the applied level are purposefully designed for students to consider their own experiences in tandem with the text, it is possible that one student may accept, while another student may reject the very same statement. What is critical here is that students supply sufficient justification to support their personal viewpoints and their logical interpretations of the text. Item three, "Nothing takes the place of persistence," is a statement that is clearly supported by the story. While sufficient contextual evidence exists in the story for support, it can ultimately be accepted only if students also perceive the applicability of this statement to their own experiences and ideas. The same is true of item five, "No obstacle is too great to overcome in achieveing one's goal." While Benjamin labored prodigiously against seemingly insurmountable odds, acceptance of this statement necessarily follows only if students personally accept the statement's meaning in their own lives or to ideas previously encountered.

The preceding three-level study guide involves subject matter typical to English classes, namely, a science fiction story. While fictional works may seem to lend themselves quite naturally to three-level study guides, one need not view their use as so limited. As Herber points out, three-level study guides are versatile, flexible, and easily adaptable to any content area in the secondary school curriculum.

Suggestions for Effective Use of Three-Level Reading/Study Guides

The use of study guides can provide a stimulating learning experience for students of varying reading ability in which use of text material plays a prominent part. As students interact, they are also learning skills that will lead them toward independence in reading and thinking. The following suggestion to make the use of study guides as effective as possible have come from experiences in working with study guides with groups of teachers and from feedback from their experiences with elementary and secondary students ranging from third graders to high school seniors.

1. The items included in the study guide should not only reflect points which the teacher feels are important, but should include a variety of items--some that provide a humorous touch, perhaps through a possible double meaning that has to be interpreted in light of the story.

2. Before introducing the use of study guides, with text material, an experience should be provided to acquaint students with the procedures involved. In work with teachers, use of a fairy tale has been effective. For example, with reference to Cinderella, statements such as "The Prince arranged for the ball" or "A search for the shoe was conducted after the ball" could be supported or rejected literally. Statements such as "Cinderella was trying to escape from her dreary existence" or "Cinderella's step-mother was jealous of Cinderella" would need to be discussed in light of presentation of the overall meanings behind the story. At the applied level, a statement such as "goodness is its own reward" might be considered as supported by students who focus on Cinderells's pleasant behavior even before the ball, or as not supported if one considered "landing the Prince" as a reward.

3. The support of statements on the basis of meanings from the text itself should be stressed. Having students keep and refer to specific locational information, (i.e. page 4, paragraph 2), encourages careful reading and thinking.

4. Students should be allowed to operate on their own during small-group discussions. If they can't resolve all items, particularly at the interpretive and applied levels, they may simply conclude that the statement may be considered as supported or not supported, depending on how one looks at it.

5. Items which could not be easily resolved can be profitably considered in full-class discussion. If thinking on the basis of reading is to be encouraged, the teacher must take great care to refrain from judging responses as "right" or "wrong", but rather should lead students to evaluate the responses on the basis of the text interpretations given.

Sources of Further Information About Study Guides

Tutolo (1977) differentiates between two types of study guides: interlocking and non-interlocking in nature. Thomas(1979) suggests a third type, which he has coined the "intralocking" guide.

The Herber type of guide, which is hierarchical and ancillary in nature, is considered an interlocking guide. Further examples of this type of guide as well as organizational pattern and reasoning guides, can be found in the textbook by Herber (1978). Also, films research data, and other materials are available; information can be obtained by writing Syracuse University Press. Use of such guides are discussed in current texts by Hill (1979) and Roe, Stoodt, and Burns (1978). Materials designed to aid teachers in learning the concepts and procedures thoroughly enough to design and use three-level guides comfortably with their students are included in Reading in the Content Areas: Teachers Edition (Alvarez and Colwell, 1979).

Non-interlocking guides are those guides which are also ancillary to the material being read, but not hierarchical in nature. Neither are they aimed specifically toward helping students develop comprehension skills by "simulating" them. These vary in exact nature, but, like the interlocking guides, contain statements or questions which students are to respond to either before, during, or after reading the textual material. Guides described and exemplified by Cunninghan and Shablak (1975) and by West (1978) would be of this type.

The intralocking guide introduced by Thomas (1979) is actually a modified cloze which utilizes the actual text material. Thomas explains and gives examples of content guides, structure guides, and concept guides which can be created by modifying cloze procedures.

Although each type of guide is best suited to specific purposes, the guides share the goal of attempting to increase student comprehension and understanding of text materials. If a teacher is working with students who do not have sufficient skills in answering questions of various levels of comprehension, the three-level study guides designed by Herber may be most appropriate, at least until these skills are well established.

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SOUND - OFF: A CATALYST FOR DIVERGENT THINKING AND CREATIVE EXPRESSION

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The Sound-Off technique is based upon the reception of auditory stimuli which are used as the catalyst for creative expression. The auditory stimuli are presented one at a time with sufficient interval between to allow each individual to identify and relate them into a unified expression that manifests his unique. perception of the stimuli and past experiences. It should be remembered that the sounds used nor their order of presentation is known to the listeners, and it is just this fact which fosters divergent thinking. The teacher should emphasize that it is expected that everyone will not identify the sounds in the same fashion, because there are no single correct answers.

A tape recorder can be used to present the auditory stimuli. The sounds can be recorded by the teacher, i.e., a door closing, a telephone ringing, a baby crying, a police siren, etc. A recording of sound effects, which can be purchased at most record shops, can also be used. There are no hard and fast rules to determine the number of sounds presented. The author has found that about ten sounds works well with fourth, fifth, and sixth graders when using the Sound-Off technique to foster creative writing.

The mode of expression the students use to communicate the story created can be written, oral, a dramatization, or a painting or drawing. The mode is determined by considering the age of the group involved and the goal(s) of instruction.

For example, the following narration was written by listening to the following sounds: a bird singing, a man coughing, and a child crying.

Introduction of first sound:

What would you do if you were a bird?

A bird singing

Introduction of second sound:

Would you put up a no smoking sign in your nest or would you let your father kill himself?

A man coughing

Introduction of third sound:

I will never smoke in front of my children. I don't want them to cry because I am killing myself with cigarettes.

A child crying

Discussion

Guilford (1962) has noted that the distinctive aspect of creativity is divergent thinking. This type of thinking is generally less related to the stimulus and often involves the juxtaposition of ideas from unrelated areas of knowledge.

The Sound-Off technique involves the student in an open-ended thinking task which is in part structured by the order of presentation of the auditory stimuli and the nature of these stimuli. It requires the student to relate the known to the unknown and to constantly reorganize his thinking. Because of this it enhances the oportunity for developing creative expression for the following reasons:

1. Auditory associations are not often used for fostering creative expression; therefore, it is an area that is not satiated by frequent requests from the teacher. Hence, it could provide more motivation than techniques which utilize other methods.
2. Chambers and Lowry (1975) have pointed out that there is an element of mystery and excitement present when an individual can only use the auditory channel to sense or identify something, and because of this, new descriptive words are called upon to interpret the auditory stimuli.
3. As the student ruminates through his past experiences searching for meaning(s) to attach to the auditory stimuli, he tends to reevaluate these experiences, and is provided with the opportunity to relate them in new and original ways.
4. The method permits spontaneous expressiveness by requiring the student to relate to the auditory stimuli which have been heard to these that are just around the corner and unknown.
5. Although the method allows for a multitude of different responses, it has structure to guide creativity. Asch (1975) has stated that a common misconception about activities which foster creativity is that they are unstructured; she states that "Lack of teacher direction can hinder creative thinking."

Conclusion

In the author's experience, the Sound-Off technique is a simple but surprisingly effective method for developing creative expression through the use of auditory stimuli. It has been used successfully with elementary school students, learning disabled students, and college students. It has also been discovered that when using this technique, children who are reluctant to communicate their feelings verbally often will express their thoughts and concerns in a story.

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STRATEGIES AND ACTIVITIES TO BUILD AND EXPAND VOCABULARY IN CONTENT MATERIALS

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Premise One: Knowing the meanings of individual words is basic to meaningful reading.

Premise Two: The teaching of technical vocabulary of content is often synonymous with concept development.

Premise Three: One conversation across the table from a wise man is often worth a month's reading.

To master any subject matter, one must learn its key concepts--that is, its language. These concepts include not only technical terms, but also the principles and generalizations, the language which may have a different meaning in another content. Edgar Dale says:

a) words are for conceptualizing. A concept is a generalized idea about a class of objects or events.
b) words are for building a good mind, one that compares, contrasts, and classifies.
c) words are for communicating, sharing ideas, understanding the world around us.
d) words are for filing, retrieving and reorganizing information.

One of the big problems in schools is forgetting. Why? The materials are not interesting. We have no incentive to remember them. The materials are not relevant, nothing to do with our lives as we live them. The materials are underlearned. We may not even understand the concepts presented. Usually, we don't file and organize with one exposure to a word or idea. Therefore, students need a systematic and planned program of vocabulary development. They need to see interrelationships of words and concepts.

One of my favorite word activities is the "Language Tree." Using any word part, such as meter, graph, mono, biblio, etc., see how many words the students can find to build the tree. The word part being used (for instance, meter) becomes the trunk of the tree. Students see how many branches they can add. There are at least one hundred meter words they could find. Student groups can take a different word part and compete in building trees. It becomes a beautiful art project for the walls of the school hallways and gets the entire student body interested in words.

A variation of the same idea is the "Rainbow of Words" activity. Make your bulletin board, chalkboard or newsprint paper on the walls of the halls into a rainbow design. A different color word is assigned to each section and students are to think of as many color words as they can to fill in the assigned section. For the color blue, for example, some words might be sky, baby boy, winning, and loneliness.

"I'd rather do it myself" is a pervasive feeling of students in classrooms. Most educators prefer to discover some things for themselves. The multi-news media succeed with this programming daily: puzzles, riddles, games, contests, especially word games. Why not the same ideas using the vocabulary of our content materials in classrooms!

Have the students take a sheet of paper, writing their first name vertically down the side of the page. They think of two words which begin with each letter of their name, two positive words which tell something good about them. Spelling doesn't count on this one, or the teacher can spell the words for those who need help.

After two minutes, play around with their responses. Some won't be able to think of words because of lack of vocabulary or poor self-concept. As a class, come up with the needed words. Dictionaries may be used.

Ask what they just did? What have they discovered? A definition for an adjective. Not a canned, dry, dull book definition, but a live, fun-filled, action, personal definition which makes sense to them and which they will never forget.

Discovery, freedom to learn, open classrooms do not mean leaving students rudderless in an environment which is merely filled with things. Things must have (1) purpose, (2) structure, (3) and fulfill student needs.

Far too many students are being "skilled to death" and they still don't read or learn. They have boxes, ditto sheets, check lists programmed junk (that's what many of them call it) and are all too often bored to death and have no motive for learning to read.

Everything done in our classrooms should be based on three things:

1) diagnosis of students--their strengths and weaknesses
2) the curriculum demands and
3) the learning styles of students.

Teachers have a teaching style. They present information and wonder why students do not learn. Of concern is the third point above. If our teaching style fails to produce learning, then we must adapt our styles of presenting information to fit the learning styles of students. Otherwise, we are wasting our time. "They get it or else," must change to "They get it, or I change my way of presenting."

Expanding vocabulary, word power, comprehension in one content area can lead to expansion in other content areas. It doesn't matter which teacher talks about the word part mono. Once learned, it works in all areas. Challenge students to transfer, to use this knowledge (it doesn't happen or transfer automatically). When they learn something about language, or anything else, have them develop the habit of thinking about how and where it might apply. Look at our one-work-part example. Mono is Greek for one.

physical education -- monogram
history -- monarchy
geography -- monocline
math -- monomial
chemistry -- monomer
art -- monochrome
physics -- monochromatic
music -- monotone
literature -- monodrama
drama -- monologue
religion -- monotheism
business -- monopoly
reading -- monosyllabic
science -- monocotyledon
health -- mononucleosis
shop -- monocycle
marriage and the family -- monogamy

Older students have been exposed to phonic rules, syllabication generalization, structural analysis, and dictionary rules, so merely repeating this information will not motivate them to be better word decoders. One way to call attention to things they need to know, to review, or to learn is to do exercises using the concepts which relate to them personally. "Name Hunt" is one such activity. Teachers use first names of students and make clues for each first name. In this activity you can use concepts such as phoneme, synonym, digraph, schwa, derivations, diminutives, homophones, tenses of verbs, long and short vowel sounds--in fact, I know of no work identification skill you couldn't use. Figure out these examples.

1) This name has a first syllable which ryhmes with the silk a spider makes, plus the schwa sound. Then add a spirited expression used in cheers by students at football games.

2) Divide this name into three parts. a) synonym for dad b) objective form of I b) sixth note of the musical scale.

3) This name has the same first two sound clusters as a word used for a rope used for tethering cattle.

One of the favorite activities of many students is the use of study guides and/or games to practice and play with words. These two variations motivate students to more awareness of the things found in dictionaries and the finite differences in terms.

ACTIVITIES

A. Matching

DIRECTIONS: Here are words dealing with the subject of TIME. How many are familiar to you? Match the word in Column I with the meaning in Column II and how it could be used or by whom in Column III. Use the dictionary if you need to.

Column I	ColumnII	Column III
epoch	a. yearly	1. session in Congress
era	b. occurring in daytime	2. history lesson
annual	c. two times a year	3. farmer talking of planting season
biennial	d. ten years	4. minister preaching
decade	e. 14 days	5. lesson in geology
	f. period marked by distintive periods of developments	

The use of three colums and having more in some columns than in others makes the activity a cognitive task rather than a guessing game.

B. Expanding Vocabulary Through Questions (Job Card)

DIRECTIONS: Read the question. Decide upon key word or words. Use reference books which will give you an answer in the shortest length of time. Answer yes or no and explain your answer.

1. Does a paleontologist lose his hair in winter?

2. If a friend called you a sesquipedalian, would you consider him truthful?

3. You are sitting on the patio with friends listening to the sound of spring. "I've never seen such an exaltation of larks," one comments. Is he talking about their music?

In Reading Strategies and Reading Activities for Grades 4-9.

(Merrill, 1977), I talk about 55 ways to motivate for, to teach, and/or reinforce vocabulary. It doesn't have to be dull, dry drill, which students resent and consider a waste of time. Language growth can be one of the most exciting adventures upon which you and your students will ever embark. And the content areas of the curriculum have the materials to work with. Once students are motivated to work on the language (words) of these materials, they will be on their way to understanding it.

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FOSTERING CONVERGENT/DIVERGENT THINKING SKILLS: A PROCESS AS WELL AS A PRODUCT

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> "If a teacher is indeed wise, he does not bid you enter the house of his wisdom, but rather leads you to the threshold of your own mind." Gibran

Within the literature of questioning, two distinct avenues of thought have emerged: convergent and divergent thinking. We even go so far as to label children as convergent or divergent learners. It would appear that one is inherently better than the other. Artists or authors much certainly be divergent thinkers: accountants and dentists operate in a world that would appear to be convergent. And yet at some point these types of thinking must merge. For example, Einstein needed to operate from a world of known to discover the unknown.

Within a classroom, it is the accepted practice that teacher-generated and student-generated questions aid thinking processes. Convergent questions are typically defined as those having a "one best" answer because they require the reader to put facts together to construct that answer. Aulls (1978) has stated that convergent questions require the student to explain, identify the cause or the effect, interpret the relationship between a series of statements, and compare and contrast. Both inductive and deductive thought operations may be involved separately or in some combination to arrive at the best answer. Convergent questions are structured to explain specific relationships between ideas and to compare and contrast points of view. The process of reasoning is developed by asking students to participate in many higher order comprehension skills. Examples of such convergent question might be:

1. What hapens if limestone is placed in distilled water?
2. Which of Senator Kennedy's arguments in favor of a National Health Plan are most opposed by conservatives in the Senate?

Divergent questions, on the other hand, go beyond the stated information to speculate on possible meanings or to use information as a springboard to create new insights and discoveries. The latter is commonly referred to as creative reading or as Manzo (1978) has stated, a fostering of "manifest curiosity." This is a term for an active, exploring, expressive form of curiosity. Its most identifiable construct is the inquiry or divergent form of questioning.

Asking a student to predict outcomes is an integral component of the Directed Reading-Thinking Activity (Stauffer, 1969). This strategy not only creates a mindset for exploring, but facilitates immediate comprehension when a student is allowed to check predictions and to argue why his/her prediction is as valid as that of the author's (Meeks, 1978). Encouraging students to hypothesize, reconstruct events, and/or elaborate on conclusions are other means for eliciting divergent responses. Divergent questions might follow these models:

1. Imagine you had miraculously escaped from a shark attack. How would you have felt and reacted?
2. What might happen if all the books in the United States were confiscated by the government?

In their text, A Schoolwide Secondary Reading Program: Here's How, Liebert and Liebert (1979) use the illustration of the lion, captured and brought to "civilization" and placed in a cage at the zoo. He constantly paced back and forth, back and forth, looking for an escape from confinement. No escape was possible and thus everyday he paced. Then, quite by accident, the zookeeper left the door open. The lion only stared longingly at the open door and continued to pace, oblivious to the freedom that was in reach because the habit of pacing had become his product, rather than a process of search.

To put this illustration into a practical classroom setting, a few years ago I was teaching an eighth grade remedial reading class and the students could not seem to answer questions, or more importantly, think beyond the literal level, even after using all the traditional methods for eliciting higher order responses. They were tuned into wanting to find the right answer (after so many years of giving wrong ones or none at all). A recent re-run of a Cling Eastwood movie had been on television the week before. I re-wrote the Western plot, weaving in enough clues that could lead them to many outcomes of the story. At a critical point, the story abruptly ended and the students were to devise their own conclusion. Taking prediction a step further, I wrote my own ending, asking them to compare theirs with mine and to be able to criticize in order to justify which one was best. This simplistic assignment was a breakthrough (or an escape) in their discovery, in that there could be more than one right way to respond based on a given set of circumstances.

Schuman (1976) devised much the same strategy in using open-ended stories. However, in the follow-up exercises the students were asked to differentiate fact from thought questions. They were to write the answers to fact questions and think about thought questions. This approach seems to inadvertly say, "We don't think about facts -- we only respond and accept them." In eliciting responses, students should be able to locate and recall facts, but also they must be encouraged to question those facts. Two plus two is not always four, and in the eyes of experts, the world was not always round. The very essence of a divergent response is to move outward in different directions from the basic literal information provided on a topic.

Again, Aulls (1978) has stated that convergent questions are best derived from expository material, whereas divergent questions spring from narrative. In an attempt to offer an opposing (or divergent view), it is proposed that a student could be challenged to come up with several ways of solving a math problem or to attempt different approaches in setting up a science experiment. And what good history teacher has not asked the question, "What would have happened if the South had won the Civil War?" Certainly the reading material in these disciplines is not considered to be predominantly narrative in nature.

The Interactive Cloze Procedure, a recently developed teaching paradigm, incorporates both convergent and divergent thinking utilizing any content-area material (Meeks and Morgan, 1978). Briefly, students are asked to silently complete a cloze passage with a lexical deletion pattern. After individually completing this task, they break into small groups and come to unanimous agreements as to the one best choice for each deletion (convergent thinking). After an appropriate amount of time, the teacher then reads the passage intact from the text, giving students the opportunity to argue over whether their choice of words might even be more appropriate than that of the authors (divergent thinking).

Fostering convergent and divergent thinking skills in students is not dependent on the type of material, but on the ability of the teacher to mold and shape that material in as structured or expanded a reading experience as possible, or as the situation demands. We must not only help children develop a purpose for reading, but a purpose for thinking as well, both in a convergent and divergent model of questioning.

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CONCEPT TEACHING AND REINFORCEMENT IN THE CONTENT AREAS

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Content material is unlike the narrative fare that most children are brought up to read in their early elementary experience. A distinguishing feature of content material is its inclusion of numerous concepts. Students who are familiar with the concepts before reading or who can derive them during the process of reading have a much easier time of it than those whose conceptual networks aren't as complete or who find the concentration of concepts overwhelming.

Making the difficult easy is a basic function of a teacher. Content teachers generally recognize the need for teaching concepts before students read when the material is conceptually dense or difficult. The way to teach concepts isn't always clear, however.

The concept teaching dilemma stems from the fact that most teachers aren't really sure of what a concept is. They don't have a concept of "concept." The work of Frayer, Frederick, and Klausmeier (1969) provides a framework for understanding concepts. They see a concept as a category of objects, events, or ideas which have common properties and which may be related to other concept categories.

The Frayer model stresses that for a concept to be understood, there must be awareness of 1) its supraordinate category, 2) other coordinate concepts within that category, 3) the relevant attributes that distinguish this concept from other coordinates, 4) some of its examples or subordinate concepts, and 5) the irrelevant attributes, often associated with the concept, that do not, however, define it.

Martorella (1976, p. 102) provides an example of a concept. A person who has a firm understanding of an "island," is aware of the larger or supraordinate category into which it fits--"bodies of land." Other bodies of land that would be different from island but on the same level are considered coordinate categories; for example, "isthmus" or "peninsula." What distinguishes "island" from its coordinates are its relevant attributes--the idea that the land of an island is completely surrounded by water. Palm trees would be irrelevant. A concept of island isn't complete unless a further category, the subordinate category is considered. At this point, examples of the concept are recognized when both examples and non-examples are presented. Oahu is recognized as an example of island, while Florida is not.

Once the general nature of concepts is understood by teachers, they can plan ways to teach specific concepts in their content field. A first step, of course, is to find out which concepts contained in particular material are unfamiliar to students. Such information can be gained informally by having students give oral explanations or by having them sort out examples from non-examples of the concept. If teaching is required, the teacher might have to consult the dictionary or other sources to make sure he or she knows the category relationships and criterial attributes to be taught.

The actual steps for teaching concepts may vary from teacher to teacher, but a central requirement is a comparison situation. Concepts are learned as students are exposed to examples and non-examples at the same time, so that the special or relevant features of the concept can be observed. They glean what a concept is by observing what it is not. For example, if the concept of "infantry" were to be developed, picture examples of infantry as well as pictures of cavalry and artillery coud be used so that, through comparison, students grasp the features that distinguish infantry from the others (Ribovich, in press). A lesson to develop the concept of "government" might present a passage describing government as well as comparison passages on "economy" and "society" (Tabachnick, Weible, & Frayer, 1970, p. 86). By considering how government is different from the others, the relevant attributes are determined.

The distinction between relevant and irrelevant attributes can be approached in two ways. Teachers may give all the features. More meaningful to students, however, would be a discovery approach. Students themselves are encouraged to examine the examples and non-examples and derive the concept's features. With teacher guidance, students can take irrelevant features, perhaps long held, and lay them to rest; they can solidify in their conceptual framework those features that are distinguishing. Within the concept lesson, discovery procedures may be used, too, to determine the concept's supraordinate category, labels for coordinate categories, as well as additional subordinates.

No lesson is complete unless an application activity is given to determine if students truly understand. The real test of concept attainment is whether the student can distinguish examples of the concept from non-examples. Factors to consider in designing the task include whether the concept is concrete or abstract and whether students require concrete learning or can deal with some abstractions. With the concept "infantry", students may sort pictures into example and non-example piles. For the concept of "government", they may check off those items in a list of written statements that evidence a government process. The application task is an important determiner for the teacher as to which students need additional instruction.

Students generally require practice in addition to that provided in a concept lesson. Here the idea of activity cards is very helpful as described by Flexer and Flexer (1977). Cards can be prepared for any content area--English, math, science, social studies, and so forth. They generally have three sections. The first gives just examples of the concept, perhaps examples of a "rectangle". The next section is prefaced with a statement such as "These are not rectangles." Squares, circles, trapezoids, or octagons may be pictured. The application section provides a mixture of geometric shapes from which students select and circle just the examples of a rectangle. The cards are helpful reminders and practice opportunities for students requiring more help after an initial teaching lesson. For able students, the cards may serve the initial teaching function because they set up the very same example--non-example comparison situation that is found in a teacher-directed lesson.

Concept teaching in the content areas will be most helpful to students when teachers have a systematic procedure that gets across what Frayer considers to be the essentials of concepts: the concept's supraordinate, coordinate, and subordinate relationships and its criterial attributes. The most promising way of developing those notions appears to be a discovery approach that is followed by opportunities at the end of a lesson and after the lesson to identify concept examples from a mixed field of choices. Analyzing and working through concepts in such ways is likely to help students expand and add precision to their mind's conceptual framework.

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IMPROVING CONTENT AREA PERFORMANCE THROUGH IMPROVING STUDENT STUDY SKILLS

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To paraphrase an old-fashioned colloquialism, the study-skills are the work horses of the reading process. They are the skills used by the efficient reader and the competent student who employs them without being aware they are so doing. The study skills should become so ingrained within the student that they become habits of study. The purpose of such efficient methods of study is to free the student's mind to think about the information presented by the author. The competent student, then, does not ponder about how to study but rather on the ideas in the reading assignment.

The study skills include a wide scope of skills, and different labels are attached to them as well as the inclusion or exclusion of specific skills. As a group, they are not discretely defined. Among the many different labels that are applied to them are locational skills, reference skills, research skills, comprehension and interpretation skills, skills of adjusting the techniques of reading to the nature of the material, the setting of purposes for reading, skills of attacking an assignment and seeing the organization of information as well as skills in using graphic aids.

A direct application of study skills can, and should, be made to each of the content areas. The student will find that the study skills are common to all content areas but also that their application will vary with each specific subject. Each subject has its own style(s) of writing, varies in the compactness of writing, and has its own vocabulary. Therefore, a student cannot readily transfer the study skills that he learns in English to mathematics, certainly not without creative adaptation which he usually is not able to do. The teacher of each subject must instruct students in the application of the skills to the subjects as the student needs to use the skills in his study.

What, then, are these skills common to all academic subjects in which the student should have competences if he is to succeed? Perhaps, foremost, are techniques of attacking an assignment. Next is the knowledge of how to see the organization of the information. This involves various levels: the organization of a book, a chapter, sections within a chapter and the organization of paragraphs. Another skill involves the act of summarizing information and taking notes. It may also involve the formulation of answers to questions. Then, if the student is expected to do research for data outside of his textbook, he needs all of the skills required in locating information as well as synthesizing the information into a report. Further, there are the skills of using the graphic aids which supplement the running text. The aids -- pictures, maps, diagrams, charts, tables, cartoons, time-lines and overlays are oddly seldom used by many high school students -- by their own admission. Perhaps, they do not know how. And finally, the student needs to know how to read directions. As one ponders these skills, he/she will see too that they are interrelated. They are not completely discrete unto themselves.

Attacking the Assignment

As one works with students, it becomes readily apparent that a majority do not have efficient methods of doing an assignment. They appear to read it, it seems to soak up the information as a sponge soaks up water. The fault here is that they are not as efficient in soaking up the information as a sponge can water.

The time-honored procedure for attacking an assignment was first suggested by Francis Robinson with his SQ3R formula (Survey, Question, Read, Recite, Review). Though there are variations to this formula, the essential steps remain the same. In it, the students read the material three times. The first is a survey: to get the scope of the information, to see the large segments of organization and how they may be interrelated to discover the new terms. This is a preparatory step in which the student notes highlights of the information and gets his mind set to the nature of the material. Then, he reads in detail for a specific purpose (Question) to guide his reading. Finally, after he has thought about the information (Recite), he reviews, reading only in detail again those parts which still elude him. This is similar to the type of reading he does for the survey.

Yet, many students resist this formula. It takes too much time! Reading the information three times! In the view of many students such a procedure is indeed too time-consuming. Therefore, the student must be guided to see the efficiency of the method. With each assignment the teacher should guide the student in the steps, identifying to the student what the steps are. The teacher should also show the student the parallel of the study formula to a standard content reading lesson. As he/she goes through each step of a lesson, the student should be informed of the steps. The student should be guided to the insight that there is a method, a science if you will, to teaching procedure. This guidance must be constant so that the student develops the habit of effective study.

Seeing the Organization of the Material

To see the organization of information the student must realize the interrelationship of the areas of information and note its logical development as presented by the author. As soon as textbooks are issued instruction should begin in this skill. An analysis of the Table of Contents should be made to note the order and sequence of the units and chapters and begin immediately to help students see their interrelationship. The student must be taught to see organization as proceeding thusly: Title, Unit, Chapter, Chapter Sections, Topical Headings, Paragraphs.

Throughout the year such organization must be pointed out and used. With each reading assignment the function of topical headings and paragraphs should be noted. Students need to be guided how to formulate questions from topical headings and to know that the answer to such questions will be found in the ensuing material (I have found college students who were unable, at first, to formulate questions from topical headings).

Then the student needs to be taught about the structure of paragraphs. He/she needs to see the predominant patterns. The most predominant one is the central thought followed by details. Other patterns he/she may encounter may be paragraphs of definition, of illustration, step of a process, chronology, cause and effect, comparison and contrast, problem solving, and in literature, narration and description. To teach these patterns, the teacher will need to 1) analyze paragraphs sentence by sentence noting the interrelationships of the sentences and 2) to alert and acquaint the student with signal words which give clues to organization and/or points of emphasis, (i.e., first, second, next, finally, but, most important, etc.).

All content teachers other than English may well think this is not their responsibility. However, it is indeed! The content teachers must realize that as they do this in science, mathematics, etc., they are also teaching the subject matter. When a student reads, he/she is reading for information. What the content teachers are doing, then, is teaching the student the process of how to get information by using the course content they wish the student to acquire. It is a change of focus from just mere coverage of content to how to acquire the content with the content being acquired as the student learns the techniques.

Obviously the skills included here use also those of attacking an assignment as well as seeing the organization of information. But, the student may need to realize what a summary is - that it is in the main the compilation of the central ideas in the foregoing material. He/she needs also to be taught and given practice in various ways of summarizing and in taking notes. Depending upon the nature of the material, notes can be organized in various ways. Of these varying methods, the outline is considered to be applicable to all material and, indeed, to be able to outline means that the student does see the organization of the material. But both notes as well as summaries can take other forms. These may be paragraphs, comparative or cause and effect columns, charts, diagrams, a listing, the steps of a process, a time-line or a flow chart. The form chosen is dependent upon two considerations. One is the nature of the information and the other is the efficient use of the notes (summaries) by the student.

One further point related to note taking and summarizing involves the answering of questions. A number of teachers have discerned that students do not always know the form an answer should be in when answering a question. They have found that upon oral questioning, the students are able to give forth with a proper answer. However, they seem to be unable to formulate it in writing. What the teachers found upon investigation is that many students are not sure how to implement in their answers such words and terms as, show, give your opinion about, support, etc. The teachers found that they needed to review for a time the assignment questions and determine with the students how the answers were to be recorded.

Locating and Synthesizing Information

This includes a cluster of skills, where the students are doing an assignment independently. But, many do not know what is involved and it seems in many instances that little instruction is given. This area also uses all of the other skill areas noted; in fact, it is a type of culmination in bringing them all into use. It is excellent as a means of reinforcement but the students must be guided in the order of procedure.

What skills might the teacher need to include to give the students an adequate competence in locating and synthesizing information? Essentially, they include:

1. Delineating the problem. The student needs to think about the problem to determine its scope and the tentative order of subtopics to be included.

2. Noting entry words/terms to use in locating information. For instance, what term(s) should be used to find information in a card catalog and in an index.

3. Knowing library skills. The students may need specific guidance in ways of using the card catalog and various references in the library. This will include also sources for information which might differ somewhat from subject to subject. The content teacher is the best person to help the students with sources of information in endemic to his/her discipline.

4. Reading to get the information. Here, we see specifically the competence the students must have in attacking an assignment, in seeing the organization of information, and in taking notes.

5. Writing the report. Now the student must have techniques of synthesizing their information, especially if they have used more than one source. They have to go back to their tentative outline, firm it then begin to write. At this time all of the instruction they have received in paragraph patterns will be used as they construct their own.

6. Giving the report. If the report is to be given orally to the class, the students must have instruction in how to do so effectively. Again, the organization of information in the report is of a high priority so that the students listening can see the logical order of the information.

Indeed, students need specific instruction in these steps. A valid procedure might be for the class to do a class project in the beginning along with their individual ones. In this way there would be instruction in the necessary skills with immediate application to their own projects for each step. Such would be the effective procedure of instruction followed by application (reinforcement).

Using Graphic Aids

Students have said that they like a lot of graphic aids in their textbooks because then there is less to read! However, by their own admission they do not use them. Why? May one reason be that the graphic aids, as obvious as they may be to those of us who teach, are aids that they do not know how to use?

It may be that the students do now know what to look for. As in reading words, there needs to be a purpose; thus it is with the various graphic aids. If one is looking at a map, picture, chart or any other graphic aid, one may see anything significant. However, if one is looking for something specific, that guides the viewing of the aid to obtain the information. Of course, there are keys and legends the student must be able to use with the graphic aid. These can be taught easily by incorporating the skills into regular lesson procedures as the students are guided to preview and then to analyze the information.

Following Directions

Reading directions may require an application of procedure with which the students are either unfamiliar or have not made habitual. For one thing, following directions requires a meticulous reading which many students have not been trained to do. Contrary to most reading, the reading of directions may require word-by-word reading. Further, the student may not know the proper procedure of reading the directions through to get an overview, then to collect materials required of such are needed, and then to go step by step as the directions are followed. Also, the students' use of the vocabulary may not be precise enough. For instance what are they to do actually when they are directed "place____," "set____," "locate____," "through the center to show its axis____," etc? Note that these are very simple English words which nearly all high school students can "read" (call) but their understanding of the specific meaning required may be vague.

As the students need to use the various study skills, teaching procedure must insure that they are given whatever instruction is needed. These skills are vital for effective study. They must be implemented and pracitced in each of the content disciplines as aids to gaining information. These are process skills. The content teacher must teach process as the means of teaching content. Content and process must be fused.

ROLE OF PRE-READING
IN CONTENT LEARNING

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The primary source of information in our classrooms should be the teacher. Yet, we are constantly hearing the complaint from administrators, content teachers, parents and the press that students can't read their assigned textbooks and, as a result, are not learning. Why should the responsibility for learning be placed on students' inability to learn from the textbooks? A good nurseryman would hardly blame the quality of his plants on his tools.

Yet, some educators suggest that teachers re-write the content material at a lower level of difficulty. Teachers will tell you that it is impractical and time-consuming to do so. Others advise a similar course by suggesting multi-leveled textbooks. However, research by Daugs (1973) shows no statiscally significant differences in cognitive achivement gains between classrooms using multi-level texts and those using one level of material.

Many advocate the teaching of reading skills such as word attack to aid the frustrated reader. Skill in word identification does not necessarily guarantee that a student will not exhibit comprehension difficulties (Oaken, 1971). Research by Kulm (1973, 1974) and Knifong and Holtan (1976) indicate that reading related skills are *not* the central skills in solving math problems.

Hill (1967) reviewed several studies dealing with the use of textbooks and concluded that "there is solid evidence to confirm that the content area textbook, as traditionally used, is less help and possibly more hindrance to the student than commonly assumed" (p. 412).

Kintsch and Kosminsky (1977) declare that many of the so-called reading problems of poor readers are, in fact, comprehension problems. And that's the point--students are failing because they can't *comprehend* or *understand* what they read! Perhaps it is not a reading problem but a pre-reading problem!

Goodman (1968) tells us that it is one's knowledge of the language and of the world that provides a framework for comprehension and by bringing this knowledge to bear on the textbook, the comprehender actively constructs meaning. By knowledge of the world he means what the student already knows.

Over a decade ago Ausubel (1968) alluded to this when he stated, "If I had to reduce all of educational psychology to just one principle, I would say this: The most important single factor influencing learning is what the learner already knows. Ascertain this and teach him accordingly" (p. 1). More recently science educators West and Fensham (1970) acknowledged that one of the most important variables that influence science learning is the learner's relevant background knowledge.

Another science educator, Novak (1976), suggested that "there is a growing body of evidence to indicate that some reasonable degree of learning for most any concept can take place if proper instructional sequences are provided, and examples and activities are used that will relate to the prior experience of the learner" (p. 504).

If students have nothing in their prior experiences that is relevant to new material to be read, they often attempt to memorize it. Ausubel and Robinson (1969) warn us that "students develop a rote learning set if they are under excessive pressure to exhibit glibness, or to conceal rather than admit, and gradually remedy, an original lack of understanding. Under these circumstances it seems easier and more important to create a spurious impression of facile comprehension by rotely memorizing a few key terms or sentences than to try to understand what they mean" (p.58). Rather than observe, apply concepts, interpret, interrelate to larger concepts and solve problems, Novak (1976) says the sequence used in classrooms is: observe, memorize, test and forget!

Boredom is another side effect of lack of prior knowledge. When students cannot make sense out of what they are expected to read, they become bored (Smith, 1978) and may withdraw from the learning situation entirely by refusing to do classroom assignments, missing classes, and/or becoming discipline problems in class. (Waetjen, 1965).

Instead of admonishing content teachers with the old and questionable cliche,"Every teacher is a teacher of reading," reading personnel should be providing content teachers with pre-reading techniques designed to organize and provide experiences for new concepts.

One technique that has been used successfully by Peters (1975-76) is the Frayer model of concept attainment. This paradigm suggests clarifying concepts according to five non-sequential dimensions: hierarchical relationships established with other concepts, examples, non-examples, relevant (critical) attributes and irrelevant (non-critical) attributes.

One dimension, reflecting current thinking on schema, suggests showing students how the new concept relates to other concepts in a hierarchy. This dimension is very similar to Barron's (1969) graphic organizer.

Since many textbooks provide only one or two examples of a new concept, Frayer recommends presenting many examples and non-examples. By examining the examples, the teacher can identify those properties or characteristics that are common to each example. These characteristics are called relevant attributes. Those properties or characteristics which vary from example to example are labeled irrelevant or non-critical attributes.

Peters used Frayer's model in developing social studies materials and compared it to the traditional textbook approach. His results indicated that both good and poor readers who used the re-written material based on Frayer's model received significantly higher comprehension scores than did good and poor readers who used the textbook method.

For meaningful learning to occur, Ausubel and Robinson (1969) state that three conditions must hold:

1) the material presented must be capable of being related in some sensible fashion
2) the learner must possess relevant ideas to which this new idea can be related or anchored
3) the learner must actually attempt to relate new ideas to those which he presently possesses

Using Frayer's model prior to assigning new material is an attempt to establish condition one and two. The third condition appears to be one of involvement and motivation. Even if the material is logically meaningful and the learner has the appropriate ideas in his prior experiences, rote learning will still take place if the learner intends to memorize. Learners must intend to relate this new material to items in their prior experiences.

Barron and Stone (1973) were seccessful in involving the learner by using graphic post-organizers. After the students learned the material, they were placed in groups of two or three and provided with the learning passage and a set of 3x5 cards on which were typed terms taken from a graphic pre-organizer used with another group of students. These students were then given twenty minutes to arrange the cards in a way that would depict relationships among the terms used in the learning passage. In effect, the students were constructing their own hierarchy. They were actually attempting to relate the new ideas, and meaningful learning occurred.

There has been some concern expressed, especially by science teachers, over Ausubel's theory (referred to as receptive learning). So many of our students appear to utilize only concrete thinking and are not using formal operational thinking while engaged in reading. Therefore, they must engage in discovery learning as opposed to receptive learning. In receptive learning, students "receive" the concepts to be learned in final form when given a hierarchy. In discovery learning the learners must act on the material in order to be led in the final form of the concept. In both instances, the material in its final form must be related to cognitive structure (Quimby, 1976.) Frayer's model enables the teacher to ascertain what the learner already knows and to teach him or her accordingly by using both receptive and discovery-learning techinques.

It is the teacher, not the textbook, who is the primary source of information. Most teachers would agree that their responsibility is to help their students understand the concepts of their discipline as fully as they can.

If the theory of prior knowledge prevails, then it would appear that the teacher's first task is to discover what is in the learner's existing prior experiences and to teach so that the new material to be learned can be sensibly related. Textbooks cannot and should not assume that responsibility. This does not mean to suggest that schools should rid themselves of textbooks. It means that the textbook should be used to re-inforce, confirm or enrich those concepts that the teacher is responsible for developing. It should be used, as Esler (1973) suggests, only after the students have acquired an understanding of the concepts. The reader, when provided with sufficient background concerning the new material, should find the textbook easier to read.

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REENACTMENT: THE USE OF PRIMARY SOURCE MATERIALS IN CONTENT READING

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Content courses have been widely criticized for several years since an eloquent argument for the use of inductive methods of teaching appeared in 1960 (Bruner, 1960). The social unrest of the Sixties prodded students into demanding more relevant materials particularly in social studies. With these changes, teachers have used different teaching methods and employed interesting media, but have continued to use standard textbooks to convey the bulk of information in a course. Whereas, reading classes have always conceded the variation in reading achievement and have therefore used basal readers with a controlled vocabulary and readability, content classes have textbooks that accommodate a fictional, median student. As a result, the honor student finds the text drab, too general and boring, while students with poor reading skills find it too difficult. In this paper, I propose the classroom use of primary source materials which allow inductive teaching methods, relevant content and low readability to coincide.

These materials circumvent the low reading ability of students by the teacher's usage of role play, simulation, inquiry, and reenactment of testimony. They supplant textbook reading by taking advantage of students' existing communication skills and powers of observation for learning concepts.

Primary source materials are the reports of eyewitnesses or experts. The Congressional Record and the hearing reports of various congressional committees are particularly useful since these materials are widely available and have no copyright. It is important to remember that the committee hearings of Congress take testimony on nearly every important issue of the nation as well as more varied smaller topics. A teacher looking at this recorded discourse should realize that testimony is, for the most part, colloquial and, accordingly, is at a readability level of fifth, sixth, or seventh grade. Only do the most technical subjects become dense, but even then the testimony overall is relatively lucid.

The congressional reports are a vast free resource. A teacher only needs to make a copy of the transcripts at a library and then duplicate the materials at school. Some public documents have such small print that they must be typed out before duplication. With these materials ready, the teacher can use them with several powerful teaching techniques.

RE-ENACTMENT

The initial usage of these documents should be a recreation of the testimony. The teacher should set up a committee table and witness stand. Students with good reading ability should be chosen initially to read the materials. Other students can take the roles of reporter, photographers or television camera operators. Reenactment is an exemplary usage of video tape recording equipment, since the tape becomes a document for study in itself.

Before the activity begins, the teacher should prepare the class for thinking critically about the testimony, its value and the reliability of the witness. The teacher should make every effort for reenactment to be at least a partial exercise in developing critical thinking skills. At the conclusion of the testimony, the teacher should elicit from the students the following:

a) The major points made by the witness.

b) The way the witness may have contradicted himself, another witness or facts known to the class.

c) The reasons the witness may have distorted the testimony.

d) The reliability of the witness.

A teacher should be careful about this questioning to avoid simple yes or no answers. The goal is to engage the higher comprehension levels of students.

Reenactment, to this point, has been a support reading technique as the poor readers can either follow along with the transcript as it is read or just listen using their hearing capacity to comprehend. The additional activities below will involve all the students equally.

ROLE PLAY

The next stage of reenactment is a form of role play. Students are chosen to be a representative of Congress or an attorney to cross-examine the witness. The interaction that occurs may depart from the line of questioning in the transcripts, but the witness must preserve his/her character and testimony already given. The questioning should try to resolve the discrepancies in the testimony given earlier as revealed by the active questioning of the teacher. A "counsel" can question two witnesses simultaneously in an attempt to play off the statements of one with those of the other. Role play may not resolve anything, yet it permits a sophisticated understanding of the concepts without reading.

SIMULATION

A more complex form of role play is simulation which requires a certain amount of expertise by the teacher (Nesbitt, 1972.) In a simulation on the Warren Commission Report of the Kennedy assassination, a teacher might organize reenactment and role play as described above. However, certain witnesses or portions of their testimony are deleted from the proceedings. At the conclusion of the session, a panel reveals its findings based on the evidence heard. Suddenly, "new" witnesses appear who give previously unheard significant testimony reflecting a conspiracy angle. The panel must reconvene and decide whether to repudiate its original report and endorse the new findings. In order for the simulation to succeed, the teacher must select and edit the transcripts, organize the class into groups and orchestrate the proceedings.

INQUIRY

The teacher could take a further step to involve the class. With the Warren Commission materials, the students are divided into groups that look up information for additional questioning. The teacher provides more transcripts, books on the assassination, microfilms of newspapers, and films. After the groups digest these materials, they can continue their role play to account for the new evidence. Competing groups can devise assassination theories and give presentations of evidence that support their beliefs. The teacher can prepare tapes of the depositions given the Warren Commission by witnesses (Chomsky, 1976). These tapes should be made available especially for low-achieving readers. By providing these materials the teacher is using the inquiry method to inform the students about the Kennedy assassination.

Thus, even disabled readers can participate and learn in content class activities. Primary source materials permit the teacher to set a purpose for reading through a variety of methods (Henderson, 1963, 1977). Transcripts of congressional hearings are particularly good documents to carry out reenactment, role play, simulation or inquiry. These techniques emphasize students' existing communication skills and powers of observation for learning concepts. As teachers use high level active questioning to develop critical thinking skills, their students can learn to discern truth from opinion or emotion. The use of primary sources or public documents fits the need for relevant materials of low readability in content classes.

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READING COMPETENCE IN SOCIAL STUDIES

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"Many teachers feel pressure to teach all courses in such a way as to improve the skills necessary for the test. In some cases, this means they neglect some course content" (National Education Association, 1978). This statement, made by a Jackson Senior High School social studies teacher, reflects the dilemma which many teachers are experiencing as a result of Florida's minimum competency requirements for graduation. Cases in which social studies teachers increasingly abandon content in order to tutor students basic literacy skills, 37 percent of the eleventh grade students in Florida failed to pass the test. Among Black eleventh graders, the failure rate reached 75 percent (NEA, 1978). They must pass this test in order to qualify for graduation. One can only imagine the emphasis which will be placed on basic skills from now on. The comment of the Florida Social Studies teachers as the competency based/"back to basics" movement captures the imagination of state boards of education across the nation.

Many social studies teachers feel compromised by the emphasis on basic skills and teacher accountability. In addition to teaching content, they are expected to teach specialized reading skills, develop vocabulary techniques, provide study strategies, adapt the basic text, adopt multitexts, employ media and learn to deal with the new criterion-referenced evaluation strategies--all of this with minimal inservice training and modest administrative support.

Even the professional journals have picked up this theme. In every issue there are aritcles dealing with ways for teaching word attack skills, methods for developing comprehension and techniques for building vocabulary. Games, kits, lottos, worksheets and workbooks all claiming to improve the students' reading abound in the social studies ads. All of these suggestions are valuable in that they remind us that reading is the foundation skill of social studies processes and products. However, all of them suffer from a serious and fatal defect: they do not indicate how they will apply to an individual student's foundational reading skills, nor do they address the larger question of specialized reading skills which are necessary to read social studies materials. This indiscriminate "cookbook" approach to teaching content-related reading skills which some are proposing assumes that all students will profit equally from exposure to the same methods, techniques, games and activities. Such random approach to improving reading in social studies will have at least two undesirable side effects: 1) Social studies teachers will be reluctant to waste instructional time on reading techniques which neither improve the student's reading skills nor his mastery of course content and, 2) students will quickly learn that the crossword puzzles, lottos, bingo games and worksheets bear little relationship to the real world of social studies materials. Herber, considering this problem of incorporating reading instruction in the content areas, states, "Reading is taught in content areas when subject-area teachers teach their students what they are required to read as they read it (U.S. Office of Education, 1979). If social studies teachers are to successfully incorporate reading skills in their content area, they must address three basic questions:

1) What reading abilities and attitudes do my students possess?

2) What reading demands are required by the book and materials which I use?

3) How can I make the appropriate "instructional match," linking a student's reading skills and attitudes with the appropriate materials and media?

In order for long term improvement of reading/social studies skills to occur, social studies teachers must develop a systematic ans deliberate approach to reading instruction in their classroom.

Determining Reading Abilities

Standardized Tests

The judgements teachers make about students' reading abilities are only as valid as the data on which they are based. Unfortunately, most of the data are the results of standardized tests. Hill (1978) cautions that standardized test results are a measure of students' frustration reading level and overestimate the instructional reading level of secondary students by as much as two grade levels. Conceding that there may be some tests which are a more accurate measure of students' reading levels does not solve the problem. The standardized data these tests yield (grade equivalencies, stanines, percentiles) have little instructional value. One of the major testing businesses, Educational Testing Service (ETS) recently made this concession: "ETS has developed a new testing and score interpretation as an alternative to the long established but unsound concept of grade equivalent scores because the scores convey misleading notions about achievement" (ETS Developments, 1978). Aside from the fact that the scores convey a "misleading notion about student achievement," they have other serious shortcomings:

1) They are not content-specific and provide data only on very general (not specialized) reading skills.

2) They do not indicate the level of a textbook or other material a student can read. A score on a standardized test of 3.0 does not mean the student can read third grade material. A score on a standardized test of 9.0 does not mean the students is capable of reading ninth grade social studies book.

3) The number of items on a specific subtest are often inadequate. For example, "the vocabulary section of a reading achievement test is merely a small sampling, seldon consisting of more than 100 words, usually presented in order of increasing difficulty. A more valid test would use a large sample of "content specific vocabulary" (Aukerman, 1972, p. 12).

4) The data cannot be used to plan instruction for individual students. One can not write an individualized educational plan (IEP) with the data derived from a standardized test.

5) Standardized tests are valid only to the extent that they reflect the instructional objectives of a specific school or teacher.

Such criticisms of standardized testing make one wonder why they have enjoyed such widespread use for so many years. Part of the answer has been the lack of viable alternatives. It is only recently that professional educators have had an alternative testing strategy available to them. Criterion-referenced tests and teacher-made content reading inventories are quickly replacing the exclusive use of standardized tests.

Criterion Referenced Tests

Criterion-referenced tests become increasingly important to classroom teachers as the accountability/tax cutting mentality influences school budgets and teaching jobs. Politicians and school board members are discovering that it is not meaningful to describe student achievement in stanines, percentiles, grade equivalencies or quartiles. They are beginning to ask the question that has always concerned teachers. "Can student X read Y?", and standardized testing jargon is no longer an acceptable response. The most accountable form of achievement data is that which measures students against specific and absolute standards rather than comparing them with mythical students in some norming sample. Criterion-referenced tests will indicate if "student X can read selection Y" at an acceptable level of mastery. Unlike norm-referenced tests, the data from criterion-referenced tests can be translated into instructional practice. These data are specific enough to permit a teacher to write a lesson plan, design a learning experience or construct an IEP for a mainstreamed student. Moreover, each student can be tested against the specific and local objectives established for a given course.

A Model for Classroom Testing

There are two basic questions every teacher should ask in order to avoid indiscriminate instruction and repetitive testing: 1) How much information do I need about the reading ability of any given student? 2) What is the most efficient way of gathering this information? The "inverted pyramid" model suggested by Harris (1970) (Figure 1) satisfies the two criteria above and is suitable for large group or individual testing. It is efficient in that it tests broad instructional goals or outcomes in the large group setting and proceeds as needed to test component skills and concepts among individual students.

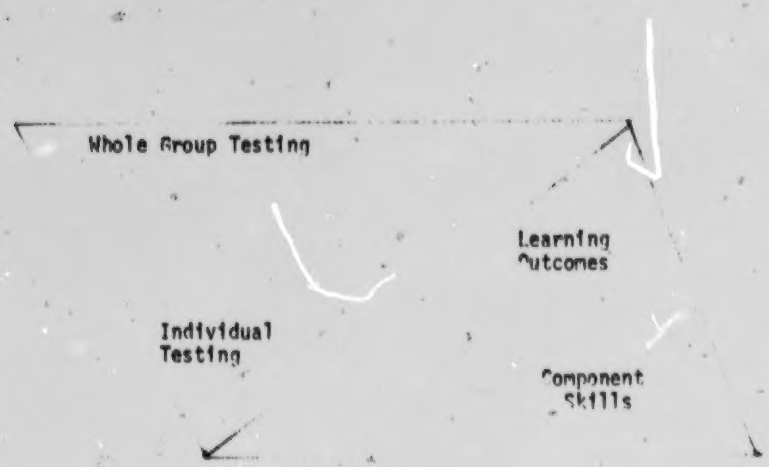

Figure 1

As we can see in Figure 1, testing should begin with the total group at the macro level. For those students who demonstrate an acceptable level of mastery on these competencies, testing is ended. Testing component objectives will continue for students who do not meet the established criteria of mastery. Students who are not screened out at this level will continue in the testing model. Each successive level of testing will contain fewer students. Ultimately, it will reach the point of the "inverted pyramid" in which individual students are being tested on their knowledge of specific skills and concepts. The efficiency and usefulness of this model rests with the fact that every student is not required to take the entire test.

A Classroom Example

Group Testing at the Macro Level

A quick and useful technique for assessing a group of students reading at the macro level is the CLOZE technique. The cloze technique is easily constructed by selecting three 250 word passages from the beginning, middle and end of the test or texts currently in use. (Taylor, 1953).

The technique for preparing the cloze passage is quite simple:

Preparation

1) Select three passages which contain approximately 250 words. These should be passages the students have not read previously.

2) The first and last sentences should be left intact.

3) Delete every nth word (typically every fifth word) until you have at least fifty deletions.

4) Each blank should be 10 spaces long. Therefore, the length of the blank is not a clue to the length of the word deleted.

Administration

Distribute the cloze passages to the entire class of students. Students task is to read the cloze passage and fill in the blanks. In the original scoring procedure only exact words were counted. However, some theorists have argued that synonyms should be counted as a correct response.

Scoring

Scoring the cloze passage is a simple procedure. The percentage of correct words will be the criterion used to determine the student's reading level (Taylor, 1953). Count the number of blanks the student has correct and divide by the total number of blanks in the passage. The sample passage has 51 blanks. A student's reading level is found by dividing his raw score by 51, locating that percentage on the following chart (Figure 2) and reading to the left (Roe, Stoodt, and Burns, 1978). This indicates the student's ability to read and comprehend the sample material.

	EXACT WORD % CORRECT
Independent reading level	57%
Instructional reading level	44-57%
Frustration reading level	below44%

Figure 2

A student's results may be analyzed and classified according to the criteria suggested in Figure 2. Students who score at the Independent Level should be able to read the assigned text with very little teacher intervention. Students who score at the Instructional Level can read and comprehend the text with some teacher direction. A Teacher Directed Reading Lesson (DRL) approach, study guides or structured overviews will be necessary for this group of students. Students who score at the frustration level on the cloze passages will not be able to read and comprehend the assigned text. Texts written on an easier level, teacher adaptions of the assigned text, lectures, tapes and other media will be necessary in order for these students to function at even a minimal level of content comprehension.

Students who score at the Frustration Level on the cloze passages will continue to the apex of the "inverted pyramid". Testing will be done on a one-to-one basis, using longer passages and sampling a much broader range of reading skills. An informal test called CRISS (Content Reading Inventory in Social Studies) (Barone & Agostino, 1978) has been developed by the authors as a diagnostic tool to evaluate these students. CRISS contains both graded vocabulary lists and social studies paragraphs. For example, a student who scored at the Frustration Level on the previous eighth grade cloze passage would be a candidate for further testing.

Again, in order to avoid unnecessary and time consuming testing, the student is asked to read orally a graded word list which has been compiled by sampling the vocabulary load of several grades of social studies materials. In this example the student would be given a fourth, fifth and sixth grade word list which contain approximately 20 words for each year and be asked to read them orally. Using a separate copy, the teacher indicates with a plus or minus the student's correct and incorrect responses. When a student misses five words in any list, testing stops. The teacher would immediately turn to the paragraph selections of the content reading inventory. The students would begin reading the paragraph which is one year below his ceiling level on the graded word list.

Each paragraph would be followed by a minimum of five questions. The questions would be phrased according to Bloom's Model of the Cognitive Domain (1956) and coded and arranged on a hierarchical order. Arranging the questions in this fashion not only provides information on the percentage of answers the student gets correct but also the cognitive level at which he is functioning. At this point the classroom teacher has identified the reading levels of the students, and has gathered some data about their basic reading and comprehension strategies. The next question might appropriately be phrased: "What can I do about it?"

Teaching Specialized Social Studies Reading Skills

The previous techniques are useful in testing foundational skills when applied to social studies materials. However, beyond foundational skills are specialized reading skills essential to social studies mastery. For example, students must be able to conceptualize social studies products and processes, understand the specialized uses of language, and master the organizational patterns and writing styles of social scientists and authors. Their teachers must know how to test for the existence and quality of such higher order skills.

We believe that all content teachers ought to help students develop the higher order competencies of their subject. If teachers do not hold themselves responsible for the legitimate learning outcomes of their subject, we fear the accountability advocates will hold us responsible for many illegitimate outcomes. To disclaim "I am not a reading teacher" is to play into the hands of those who would push us to a cheapened and distorted "basics" curriculum with little formal social studies content.

Preaching this responsibility is easy. The classroom content specialist needs a realistic and usable classroom process that 1) identifies the types and quality of student reading skills, 2) identifies the reading demands of different types of curricula and teaching styles, 3) assists in making an instructionally valid match between one and two above. The opening part of this article dealt with step one of this process. The following sections deal with steps two and three.

The question of which reading skills and comprehension skills are implicit in different types of social studies/history curricula and teaching techniques is still inadequately researched (Lunstrum, 1976). Until recently most reading specialists and social science researchers analyzed content materials from the perspective of readability. They used formulae such as the Fry, Fog, Spache, or Dale-Chall, which emphasized quantitative components such as syllable number, sentence lengths and number of hard words. These formulae give a quantitative "grade equivalent" or "grade level" score for the material. However, they ignore the semantic, linguistic and conceptual powers that the real life readers bring to such materials. In contrast, the cloze technique takes into account all these factors.

The appropriate questions here deal not only with the grade level of social studies reading materials, but with the possibility that various types of social studies/history curriculum materials--inquiry, narrative-descriptive, discovery, jurisprudential, law-related, primary source based, value-oriented--demand different configurations of reading and comprehension skills.

The ultimate question is whether a given student can read such materials and achieve whatever ultimate outcomes are designed into such studies.

The questions above are part of a larger set about the purposes and outcomes of social studies education. Many social studies theorists have written about the desired outcomes of social studies instruction. The four-item list by William Merwin et. al. is typical of the major outcomes usually identified by the theorists: 1) The purpose of social studies education is the inculcation of traditional American/and or Western and/or World values, 2) the transmission of knowledge from the parent social science disciplines, 3) the development of critical thinking skills, 4) the presentation of guidelines for effective citizenship (Merwin et. al. 1974). Do different goals demand different reading skills?

One clue that the answer is "yes" came from the "New Social Studies" curricula of the 1960's and early 1970's. Many of the curricula with inquiry and discovery formats clearly rewarded students with superior reading and comprehension skills. Their ability to work with primary sources, detect biases, analyze logical structures, make and test hypotheses, gather data and so on were implicit in the materials and explicit in the reward systems. Unfortunately, few of the teacher training workshops focused on how to help students without such abilities to develop the necessary functional higher level skills. Such curricula often became the domain of the very bright, meaning the superior, reader.

The readability formula approach does not help with the problem of determining the linguistic and semantic demands of different types of curriculum materials with differing major goals implicit in their desired outcomes. Recently the National Institute of Education (1975) suggested that the concept of material "teachability" might effectively complement the concept of "readability". Until a more sophisticated system for evaluating reading material "teachability" or its twin "learnability" generates usable answers, social studies educators will continue making educational decisions on inadequate or incomplete data.

Instructional Matching

Another step advocated for improving reading in the social studies is that of making the appropriate instructional match. The concept of instructional matching is not new. Its most recent formulation is in mainstreaming, with its insistence on the least restrictive learning environment. This concept demands that students be placed in situations where what is taught has a strong relation to what is learnable. Making the appropriate instructional match is a function of knowing the student's reading abilities and needs, and knowing the implicit reading demands of the curricular materials. Knowing about students is not the same as knowing about the reading content, and knowing both separately is quite different from knowing how they interact. Our injunction is that the student must be equal to the curriculum. "Equal to" means that the student must be able to deal effectively with the reading and comprehension demands made by the materials and instruction. It verges on the immoral to demand of students learning outcomes for which they have neither the talent nor the training. If our curricula in social studies does that to children, it is little wonder that they do not come to love us or our teachings.

Identifying Social Studies Concepts

To test at the broad outcomes level, teachers give students ten to fifteen short readings, articles, news clippings, headlines on sociological topics, such as drug abuse, life styles, sexuality and family structures. Their task is to group the materials into two or three related categories, and to then explain at the common sense level why they grouped the materials as they did. Students making reasonable groupings supported by common sense explanations probably can apply the same comprehension and reading skills to standard text materials. Students unable to make effective groupings or explanations may suffer from a variety of deficits. It is possible that some students can read the material successfully in the sense that they can paraphrase any given article but cannot relate clusters of articles.

We believe it essential for every social studies educator to make this type and level of instruction an ongoing part of classroom routine. Not to aim at conceptual understanding violates every goal of our disciplines and every tenet of educational psychology. Teachers need to teach students about how concepts are formed.

Teaching About Concept Formation

A sample instructional sequence follows. It includes pre-test items, a brief reading for theoretical input, and some post-test items.

A concept may be a word or idea that links, connects, or unifies other more specific words, things, ideas or concepts. For example, a word that unifies baboons, gazelles, giraffes, and deer is "animals" is a concept or class word, indicating a cluster of things a writer or speaker judges to be related.

Sociology uses concept names as a king of shorthand, compressing many pieces of behavior into a single word or phrase; family structure, social goals, mobility, deviance. To master this discipline you must master the process which generates these concept - names. You must also understand how the factual information subsumed under a concept term is gathered, e.g.via interview, observation, and surveys.

Concepts or generalizations or laws or rules may then be statements which try to answer the questions "What do all these facts prove?"

Concepts become less and less true as they include more and more events, things, people, ideas, or "facts." "True" here means convincingly probable to other people. There is a powerful difference in provability between the statement, "I see a four legged, fur covered, two-eyed, white with black stripes thing running, " and the statement "The structure of American families is changing for the worse."

The pre-test items might look like this:
1) Define the word "concept" according to our textbook, and the dictionary. Do not use these books, do it from memory. I
2) Which word in each series includes all the other words:
a. dog b. cat c. monkey d. horse
e. animal ______
a. man b. woman c. family d. son
e. daughter ______
a. crime b. alcoholism c. status
d. fame e. power ______
a. animals b. family c. living things
d. plants ______ II
3) Write a word or phrase that names the concept unifying each series of words:
a. brown, green, red, purple ____________
b. white, yellow, red, black ____________
c. baseball, boating, backpacking ________
d. democrats, republicans, teacher unions, hockey team, drill team ________________ II

The post-test could include exactly the same pre-test items and problems and/or alternative forms:
1) What parts of speech are concepts usually? __________ II
2) The content of a concept is often:
a. ideas b. names c. things d. a + b II
3) Write a word or phrase that names the concept unifying each series of words:
a. Amish, Quakers, Seventh Day Adventists, Mormons __________
b. honesty, punctuality, thrift, obedience __________
c. homosexuality, drug use, pornography, alcoholism
d. tall, short, hot, cold, lukewarm, cool __________ II
4) Write a good definition of sociology. Include ideas about who, what, when, and where as these words apply to sociology. III

Summary

The procedures of cloze, oral and silent reading, informal inventories, testing at linguistic and semantic levels for comprehension, combine to give teachers valuable information. First, those students who can probably handle the reading demands of a sociology unit are identified. The wise teacher would design learning exercises that took advantage of this level of skill. Second, another few students needing the attention of the reading specialist or reading teacher have been identified in a content area context. These students may be able to develop reading skills which would be more useful and positive than continuing to fall behind in the "reading the content material" race. Third, the subject matter teacher may recognize a previously unnoticed group, who reads words effectively, but who needs training in higher level cognitive processing. To show students how words combine into powerful organizing forms called "concepts" would be a lifelong accomplishment.

Our conception of social studies education says that these are the data teachers need to make instructionally valid decisions. No person would criticize a process that helped students achieve a respectable and literate content mastery.

None of these specific results, and related teaching learning strategies can be derived easily from standardized test data. This usefulness is a major reason why criterion-referenced tests and informal reading inventories in social studies will become the dominant assessment forms in the near future.

If we are to avoid the situation in which reading instruction is pitted against social studies instruction, it must be incorporated as a natural part of the social studies curriculum. All of us, teachers and students, will lose in such a trade off. Reading instruction must be incorporated as a natural part of the social studies curriculum. Social studies teachers must learn the diagnostic and instructional strategies which will permit them to adapt instruction for the full range of reading abilities found in their classrooms. Reading instruction must no longer be within the exclusive perview of reading teachers and reading specialists. Almost fifteen years of Title I reading improvement programs have failed to significantly increase students' reading ability in the content areas. If social studies teachers do not help to improve reading competence in their content area out of a sense of professional pride, they may soon discover that they will have to do it out of self defense. It would be better for all if we acted out of pride.

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PICTURING CONCEPTS AND RELATIONSHIPS IN SCIENCE

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A common tenet of good teaching is that new information be related to old so that it makes sense or integrates with the ideas and experiences of the learner. Behind this tenet and the suggestions offered in this paper lie several assumptions about learning:

1) That variety in assignments and classroom activities stimulates learning (and that the lecture/recitation format needs to be interrupted at least occasionally):

2) That even competent and conscientious readers often have difficulty attending to and remembering what they read in science textbooks;

3) That productive language (speaking, writing as opposed to listening and reading) enhances learning:

4) That ability to "chunk" information, to understand things in relationship--learned by discriminating, categorizing, and evaluating (Hurd, 1971, p. 57)--promotes ability to understand and retain facts at the literal level (Ausubel, 1963, p. 129); and

5) That good lessons emphasize one thing at a time, work from the known to the unknown, from the concrete to the abstract.

One way to encourage the integration of new information with old is to re-structure learning situations so that new information is presented visually as well as verbally. The additional channel aids memory, but more importantly, it reveals relationships within the new information, thus promoting concept learning rather that mere memorizing. Methods of encouraging students to picture concepts and relationships in science include the following:

1) Sketching something which has been described in writing.

2) Converting information into bar and pie graphs, and

3) Completing advance organizers.

Visualization is critical thinking presented in concrete terms. It is a teaching tool for able and less able learners. The teacher should guide the students through a chapter carefully, examining sketches drawn as illustrations to re-inforce information given in the written text. Next, the teacher should choose a passage students can read and then draw their own sketches showing how well they understand the data given in the text. Earth Science texts are particularly appropriate for this activity since they frequently contain information which students can depict visually.

Sketches suggesting the movements and effects of glaciers can be made after a single reading of a written description. Students can then exchange papers and explain what they gleaned from the sketches. Layers of rock can be portrayed in ways that symbolize the probable origins and processes that contributed to their formation. Differences between the sketches made by various students can be discussed before a master poster is made by one of the more artistic students for classroom display. On a more sophisticated level, students can sketch experiments performed in class or make sketches based on the written descriptions of experiments in their textbooks. The accuracy and inclusiveness of these sketches could then be evaluated by having other students or the teacher perform the experiment according to how it is depicted in the sketch. The point of all of these activities is that students have to understand the material thoroughly to convert it into a visual form.

A more abstract form of visualization concerns the use of pie graphs or bar graphs to depict numerical data in a way that clarifies comparisons and shows relationships. Pie graphs are merely circles representing the whole of something, such as the total world population or all of the physical elements that make up the human body. The circle--or pie--is then divided into portions--or pieces--that represent the component parts of the whole, such as portions of the world population made up of different elements. Pie graphs are especially effective for depicting percentages. A sample pie graph is offered in Figure 1.

Bar graphs are slightly more complicated than pie graphs because they show the relationship of two variables rather than the parts within one system. Basically bar graphs are rectangles with two axis-down and across. One axis depicts regular, numerical increments of the one variable while the other axis depicts regular numerical increments of the other variable, each beginning with their lowest counts in the lower left hand corner of the rectangle. The crucial point of information on a bar graph is where the one axis intersects with the other. This point is customarily filled in with a bar of solid color down to the bottom line of the rectangle, thus giving the graph its characteristic bars of different lengths to suggest the different quantities of the affected variable that is being measured. Bar graphs are especially effective for depicting the effects of successive additions to some physical property that can be measured, such as additional weight applied to cylinders of gas with consequent effects on the density of the gas.

Figure 2 shows a sample bar graph.

Bar graphs can be constructed from data gathered during experiments or data supplied through representative numerical accounts described in the written text. They can also be constructed from data already visually presented in the form of tables. One of the advantages of converting tables into bar graphs is that the student making the bar graph must select only some of the data at hand. Redundancies or extraneous information will not be included. This means that the student must understand the concept underlying the data in order to make sensible selections from among the data available. When whole classes construct bar graphs, differences in what individuals select for inclusion becomes the focus of debates and discussion, thus promoting concept development through speaking as well as visualizing.

Before assigning pie graphs or bar graphs, teachers should take care to teach the subskills involved. First of all, attention should be regularly directed at illustrations in the text, particularly at the pie graphs and bar graphs included. Students must be familiar with the conventions of labeling illustrations and of reading them from top to bottom, left to right. Discussion questions and study guides should direct attention to literal interpretation as well as relevant applications of the information contained in such illustrations. Finally, the class might need some in-class practice making judgments about what should be included and how to set up the information. For example, with the whole class looking at a table of information, the teacher could draw a rectangle on the board and ask for suggestions as to what each axis might include. At first, the teacher might wish to establish the lowest and highest numbers needed on each axis and then let the students merely complete the graphs on their own.

Just as graphs aid students in interpreting numerical information, so advance organizers help them sort out main ideas and relationships among pieces of information. Again, the teacher has to preview the material and make decisions about how the information might be visualized. Advance organizers are interpretations of important data conceived at a more abstract level than the text on which they are based (Ausubel, 1963, pp. 81-83). As structured study guides, advance organizers are introduced before the reading assignment is begun. As such, they help direct the students' attention to the interconnections among pieces of information.

To construct advance organizers, the teacher should jot down as many ideas as can be recalled after reading a passage. These ideas should then be grouped into a visual pattern that shows the overall structure of the main ideas in relationship to each other or of the details in relationship to the main idea. Figure 1 shows a few of the shapes that might be adapted for graphic overviews. These shapes are representative of the kinds of structures that might underlie certain written descriptions in the sciences. For example, hierarchies, with their forked subdivisions, show how one general category is comprised of two or more parts which are themselves comprised of two or more parts and so on. Hierarchies are ideal for showing family relationships in biology or traits of identifying species within one family. The important thing about advance organizers is that they do more than merely organize the material; they aid learners in visualizing the concepts inherent in the material.

One popular biology textbook contains an exercise that is ideally suited to adaptation as an advance organizer structure (Otto et al, 1977, pp. 85-88). In the original exercise students were asked to identify species of fish by referring to a list of 34 traits. Each decision about a single trait led to a decision about another trait until finally the range of possibilities was narrowed down to a specific species of identification. In the orginal exercise students were asked to start at the top of a list and choose between two traits--either the fish has scales or it does not. The choice regarding scales led to another choice further down on the list. And that choice led to yet another choice until they had finally worked their way down the list and identified their fish. Students could complete this exercise, even correctly identifying the fish without ever comprehending the concept of a hierarchy of traits. This exercise may be clarified by having students fill in the traits on a hierarchical advance organizer so that they see that every step of the identification process involves choosing between mutually exclusive traits and thus narrowing the range of possibilities for the identification of a specific fish. Thus students come to understand the principles underlying species identification.

The more students participate in the translation of verbal materials into visual form, the more meaningful will be their learning of new information. The teacher's job is to make decisions, first about what new information may be confusing to students (based on previous trouble spots and common sense) and second, about how this information might be interpreted visually. A word of caution is in order here: there is never enough time to construct visuals for all the important information to be covered. Not only that, but very often the main points do not lend themselves to graphic interpretation. Therefore, it is well to keep in mind that very often a thorough understanding of some relatively minor aspect of the main point may indeed lead to a better understanding of what might be considered the overall concept of the material--or such an understanding might very well interest or motivate students to the extent that they work much harder in reading and comprehending the other material in a chapter.

All of the tasks described above could be adapted as note-taking assignments, small group projects, or test items in the innovative science classroom. The extra time and attention these projects might take would be more than compensated for by the increased understandings and morale that they promote.

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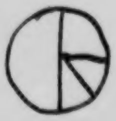
Figure 1

SHAPES THAT COULD BE ADAPTED FOR GRAPHIC OVERVIEWS

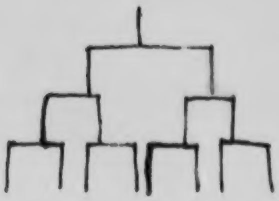
PIES

The whole and its parts show proportions



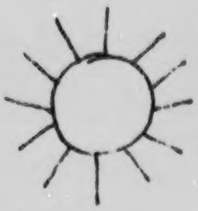
HIERARCHIES

The branches show sub-categories and
examples (see Figure 7, this monograph)



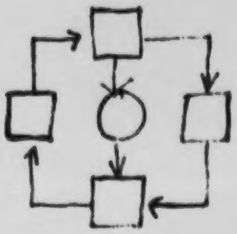
SPOKES

The hub depicts a main idea and the spokes
represent details when all details are of
the same importance



FLOW CHARTS

The geometric shapes represent stages and
the arrows indicate direction taken by
main idea, subordinate idea, and details
in paragraphs, articles, and books

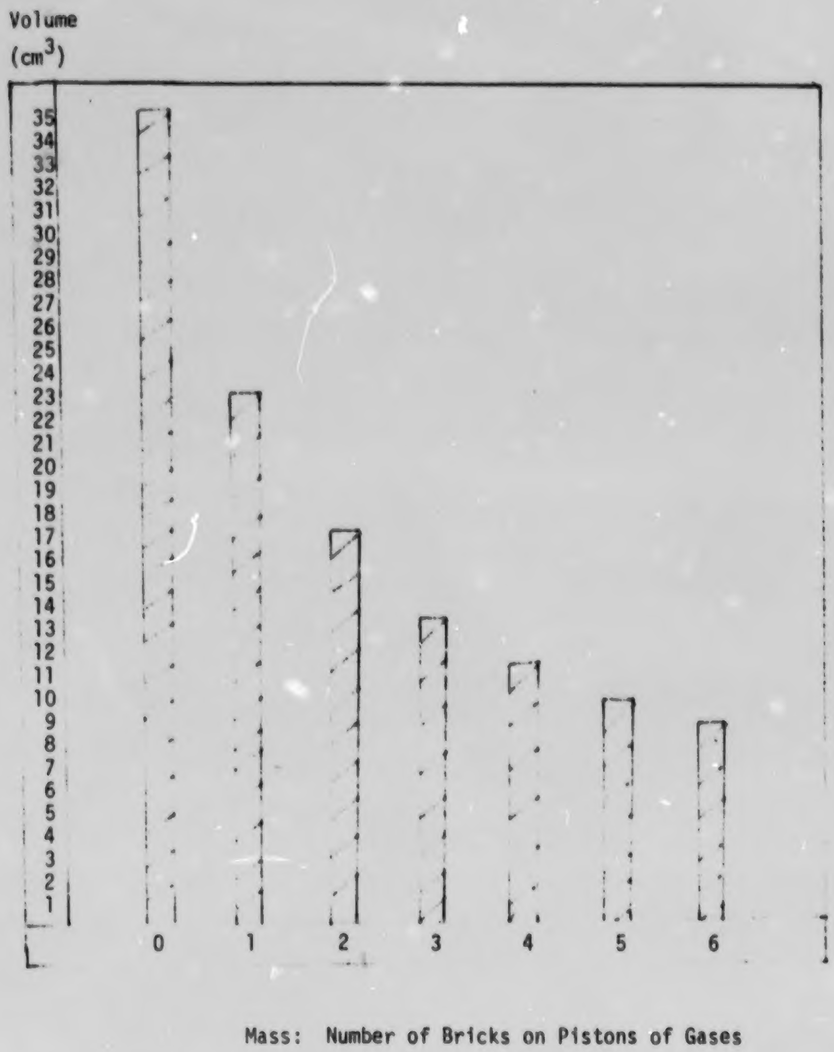


*Reprinted with permission from Bechtel, Judith and Bettie Franzblau. Reading in the Content Areas: Science. Washington, D.C.: National Education Association, in press.

Figure 2

SAMPLE BAR GRAPH *

ELASTICITY OF GASES **



** Air, propane and carbon dioxide

* Based on Haber-Schaim, Uri, et al. Introductory Physical Science, 2nd ed. Englewood Cliffs, N. F.: Prentice-Hall, Inc., 1972, p. 43.

READING BELONGS IN ACTIVITY-CENTERED CLASSES, TOO

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Recent educational journals, conferences, and in-service sessions have emphasized the need for content area teachers to help their students read and understand their textbooks better. Most of this advice has been directed at teachers of content area subjects--language arts, social studies, science and mathematics. Very little advice or encouragement, however, has been offered to teachers of activity-centered courses--physical education, industrial arts home economics, art, music, and business. The very nature of these courses usually requires students to engage in psychomotor activities such as playing games, making projects, performing musical compositions, operating business machines or solving bookkeeping problems. But teachers of these activity-centered areas still have as much responsibility and opportunity (perhaps even more) than do teachers of content area subjects to motivate their students to read and to help them solve their reading problems.

Betterini (1969) described how he combined the teaching of reading and study skills with the teaching of industrial arts. Organizing his class into a corporate structure, he encouraged his students to research, plan, develop and market a product--an ice bowl. The students discovered for themselves the need to study resource materials in order to determine the best supplies, processes and marketing techniques. They presented their finding to the class by means of charts and graphs. Commenting on the success of his program, Betterini wrote:

> Recognizing that the product is not an end in itself ... an attempt has been made to depict an industrially manufactured product in a sociological setting, utilizing materials, tools, and industrial processes which have evolved from our present day technological society (p. 147).

A different approach for fusing reading instruction into technical--vocational classes was described by Carney and Losinger (1976). Their two-year college students devoted one period per week in English class to the study of their auto mechanics text. They were given a hand-out of difficult terms for each assignment and taught to find meaning through context, in the glossary, or in the dictionary. They were also taught to preview a chapter by examining bold-face headings, illustrations, introductory and concluding paragraphs, and they were provided instruction in how to recognize the organizational method of presentation. They were encouraged to underline important information and to take notes. As a result of this special instruction, these students saw the need for reading and study skills, and they could apply their textbook learning directly to their automotive repair work.

Schultheis and Napoli (1975) have detailed several techniques that can be used to incorporate reading and study skills into business subjects. They advocate extensive work on vocabulary development, since many students fail business courses because of the high incidence of common words used in specialized ways. They recommend flash cards, quizzes, puzzles, and other audiovisual techniques.

Even teachers of such traditionally activity-dominated classes as music and art have recognized the advantages of correlating reading and subject matter. Tirro (1969) has suggested that music teachers need to help their students read music history and theory books, indicating that some theory books require the same reading and study techniques as math books. Erickson and Thomas (1968) have urged the establishment of classroom libraries in art rooms so that students can seek answers to their questions about artists or art processes in easily accessible books.

Perhaps one of the most unusual places to find the teaching of reading is a physical education class, but Sanford Patlak, a basketball coach and P.E. instructor, worked with his school's reading specialist to devise a plan for incorporating reading into his classes (1968). First, he created a library corner in the locker room next to the balls, bats, and other athletic paraphernalia. He included fiction books as well as biographies of famous athletes and how-to-do-it books, all spanning a wide range of readability levels. The name "Coach Patlak" was stamped in each book in various colors to indicate the difficulty levels of the books. Patlak also installed a bulletin board on which he pinned current newspaper articles, the Athlete's Creed, and instructions for acquiring a particular skill, for example, "How to Shoot a Perfect Throw." At the beginning of each class, the coach spent a few minutes asking the boys what they were reading, telling them what he was reading, and making specific suggestions for future reading. At the end of the school year, he presented all the students with library cards to the local public library and encouraged them to continue their reading throughout summer vacation.

The preceding illustrations indicate that the teaching of reading is, indeed, the responsibility of virtually all content area teachers, even those in the activity-centered areas. Like all other content area teachers, these instructors must survey their subject matter and determine which reading and study skills are essential for mastery of their field. For example, before students can master any field, they must first conquer the vocabulary, and they must often learn specialized definitions for common words. "Scale," for instance, means one thing to a musician and another thing to an artist; "value" has one meaning in art but a different meaning in business. Imagine the problem facing students who have just learned to baste in sewing class and now try to apply that same technique in cooking class!

Systematic vocabulary development should be an integral part of each class. It is not enough that students know how to dribble; they must be able to recognize "dribble" (or "foul," "love," "guard," etc.) twenty years hence when their instructor is not available to help them. The future automobile machanics must recognize the names of tools, or how will they be able to order supplies for their own shops?

In order to be an effective artist, musician, athlete, typist, tailor, chef, or mechanic, one has to be able to follow directions accurately and in sequence. Teachers, therefore, need to plan systematic lessons in how to read and follow the kind of directions most often needed for success in these areas. Teachers too often simply explain or demonstrate a process to students and too seldom require the students to read the directions for themselves. For example, mechanics must be able to read and follow the directions in the 1979 automobile repair manuals, or how can they be expected to follow the printed directions in the 1999 manuals? Today's football coach does not even know what rules and regulations will govern the sport in 1985, and the home economics teacher does not know what appliances the homemaker of 1990 will have to maintain. The teachers of art and music cannot teach all the techniques and processes of creativity their students will need in the future, but like their colleagues, they can teach their students how to read and follow directions so that they can cope with whatever the future requires.

Another area requiring special attention by the activity-centered teacher is critical reading. Most students need to be taught how to read product labels and advertisements and how to make wise purchases. Confronted by the rising cost of materials, the fine arts and practical arts students must learn to choose the most suitable and cost-efficient products for their projects. The average consumer is faced with a seemingly endless array of merchandise from which to choose and only careful reading, comparing, and studying can prevent costly purchasing errors. The music or sports buff must learn to judge the validity of criticism found in newapapers and magazines. It is only by providing specific guidance and practice in critical reading that activity-centered area teachers can prepare their students for the future.

Study techniques and flexitility also have an important place in these curricula. Future coaches and knowledgeable fans must be able to read diagrams, referees' hand signals, and the graphs and charts that contain data regarding games and plays. Vocational students must learn to read blueprints, drawings, and patterns; they must be able to visualize the completed house or dress; and they must be able to anticipate how a recipe will taste. They must use the table of contents, glossary, or appendix to locate the information necessary to solve a specific problem; after finding the general area, they must learn to skim or scan to find the specific location and then switch to slow, careful reading in order to comprehend and remember specific details. Musicians must first scan a score, noting key, shifts in time, and other pertinent factors; then, they must carefully and slowly examine the piece for details.

It is perhaps in the areas of motivation and the development of reading interest, however, that the activity-centered area teachers can best serve their students. Many students in these courses are often uninterested in their academic subjects, and they may fail to see the immediate need for reading or study skills. They may, however, be willing to read books and engage in research about subjects in which they are talented or interested if the books are readily available, written on their reading level, and recommended by their best friend or favorite teacher. Coach Patlak's classroom library, bulletin board, and book talks could be easily adapted to almost any classroom situation.

Because students usually have a high degree of intrinsic motivation in activity-centered subjects, teachers of those courses have a unique opportunity, and thus an obligation, to moitvate and to help these students become better readers. The teaching techniques are neither difficult to learn nor time-consuming to present to a class. In the process, the teacher will be helping these students to become independent adult readers who can read the rule books, trade manuals, and direction guides of the future.

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VISUALIZING AND CATEGORIZING AS OPTIONS FOR EFFECTIVE READING IN A SCIENCE CONTEXT

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Visualizing is a multilevel strategy from "literal comprehension (decoding of individual sentences) to interpretation (recognizing themes, making inferences) and application (solving problems)" (Bechtel and Franblau, in press). Students of varying ability will apply the techniques of visualizing according to their level of conceptualizing. Vocabulary development affects the way students visualize, interpret, and translate science concepts into concrete applications. Difficulties in comprehension of the text can be readily screened as learners either portray through diagram the concepts they derive from science texts or interpret a given diagram by writing an explanatory paragraph.

Visualizing

While students are appraising one another's pictorial ideas from selected science passages, the teacher is evaluating the levels of learning demonstrated by different students. The teacher makes decisions about the students' strengths and weaknesses in the area of reading and writing.

Visualizing Concepts: Diagrams and Passages

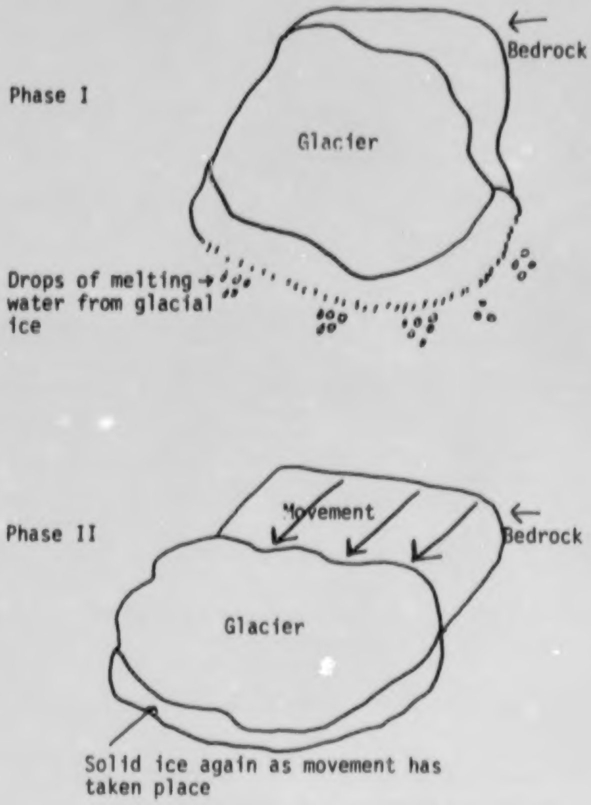
The important thing to remember about asking students to visualize from a written text is that the drawing will not represent a work of art, but rather a representation of a reading structure. The drawing at the most is an indication of their best conceptualization derived from their understanding of the ideas embedded in the text.

The points a teacher should look for are the main and subordinate ideas explicit in the drawing. If not, why not? Is the drawing too literal without interpretation?

Of course, once teachers ask for imagery reconstruction in the form of diagrams as conceptualized representations of written paragraphs, they are automatically requiring higher levels of thinking, i.e., applied level. The students are not only being asked to recognize ideas (i.e., interpretive level), but to reproduce them.

The labeling of the different parts of the diagram has to be chosen judiciously by the students to clarify the points they believe are stressed in the paragraph. During this process the students plan tentative diagrams, question their concepts, and edit the material in order to make concrete presentations out of the abstract reading.

To construct a specific exercise teachers guide students through a chapter encouraging them to examine sketches illustrating the written text. As a homework assignment, the students in class A are asked to conceptualize Theory I and Theory II in written passages, selecting main ideas, supporting sentences and details from the sketches in Figure 1: Two Scientific Theories of Glacial Movement.

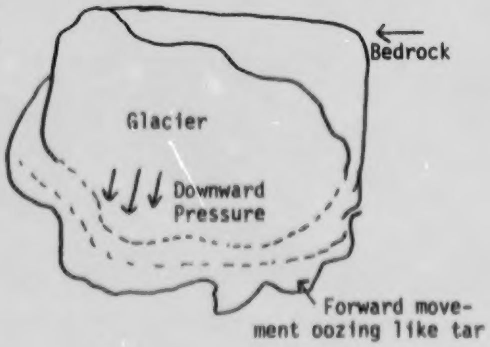


Theory I

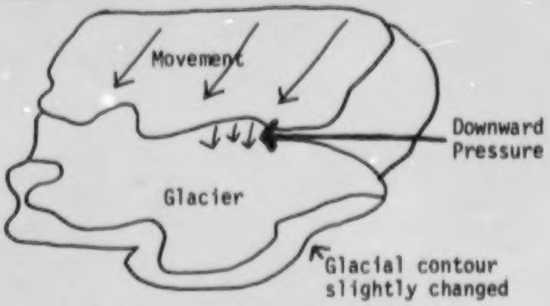
Phase I
Bedrock
Glacier
Drops of melting water from glacial ice
Phase II
Movement
Bedrock
Glacier
Solid ice again as movement has taken place

Theory II

Phase I



Phase II



Class B is asked to read the following passage in the same text (Namowitz and Stone, Earth Science--The World We Live In, 1960, p. 130) and to construct a sketch depicting the two theories of glacial movement.

Passage: How Glaciers Move

Gravity causes glaciers to move, but the exact manner in which these great masses of ice do so is not yet known. Some scientists believe that glacial movement results when the bottom ice melts under pressure, rolls forward a bit as water, and then freezes farther ahead. Others believe that glaciers flow under pressure in a manner that resembles the oozing movement of tar or pitch. But whatever the explanation of their motion, certain characteristics have been observed. Friction with bedrock slows the motion of ice just as it does that of running water. Consequently a glacier moves more slowly at the bottom than at the top, more slowly at its sides than in its center, and more slowly over a rough bed than a smooth one. Like running water, a glacier moves faster over a steep, straight course than over a gentle, winding one. Just as greater volume of water causes greater velocity, so does greater thickness of ice. Glaciers move faster in warm weather than in cold weather.

Categorizing

"Categorizing important words in a textbook gives students opportunities to practice vocabulary meaning and use advanced organizing skills" (Bechtel and Franzblau, in press). Figure 2 presents an example of this activity which is taken from the reference just given.

Instructions to science students include:

1. Select within your assigned readings words which are important to the main ideas of a chapter and which would help you to understand better the material you are reading.

2. Categorize these words by making two different charts:
   a. to demonstrate you can discriminate between elements and compounds.
   b. to show you can collect the same words under three different topic headings.

Figure 2
CATEGORIES

Word List: alcohol, asphalt, copper, lithium, cesium, calcium, petroleum, galena, phosphorus, titanium, methane, helium, pitchblende, potash, lime, sodium chloride, poloium, radium, ink, copper oxide

Directions: Make two different charts

Chart 1. Decide which of the above are elements and which are compounds.

Chart 2. Decide which three topic headings would collect all of the words in the above list.

Example

Chart I

Element	Compound
copper	asphalt
radium	galena
	ink

Example

Chart II

Liquid	Solid	Gas
alcohol	galena	methane

Summary

Visualizing and categorizing may now be seen as options for effective reading in a science context, but there are additional points to keep in mind.

Teachers who use visualizing and categorizing strategies should be aware that some students may experience difficulties using this technique. If a student expresses feelings of severe discomfort when asked to diagram a passage, write several paragraphs based on a sketch, or put words into specific categories, it would be advisable to check with a diagnostician concerning the student's ability to utilize visualizing and categorizing techniques.

Usually teachers find most students respond with enthusiasm when a change of pace from the routine is offered. Visualizing/categorizing strategies enable most students to read and concentrate in creative, critical and analytical modes.

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SECONDARY CURRICULUM TRENDS:
IMPLICATIONS FOR CONTENT AREA READING

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Secondary curriculum in the late '70's has changed considerably from the previous decade. The comprehensive high school described by Miller and Trump (1968) in their earlier book is quite different from today's.

"Today's secondary schools are especially innovative in challenging very traditional beliefs about curriculum content, methods, and structure (Trump and Miller, 1979, p. 17)." Changes in curriculum content in the subject matter areas have been numerous. When any aspect of a curriculum, say a content area changes, teaching and learning methods also vary. They in turn affect reading. Thus, curriculum trends have definite implications for content area teachers, especially in reading.

While the curriculum of today has changed, the current situation in content area reading is also complicated because of the "knowledge explosion." Secondary schools can't teach all the current knowledge and facts become obsolete daily. Students are required to read more than ever, quite a bit independently (Roe, Stoodt, and Burns 1979, p. 222).

Thus, since curriculum changes have been many, and the knowldege demand in today's secondary schools is high and increases daily, it seems especially appropriate to focus on major curriculum issues and developments, then discuss implications for, and adaptations in secondary content area reading.

English

The secondary English teacher has had to help students with reading skills in his or her classroom for quite some time. Often, English teachers have had to be responsible for reading or language arts skills, especially in the absence of a reading specialist. Before recent changes in content in the English classroom, readers in English had to have all sorts of reading skills because they encountered so many different types of reading -- plays, poetry, short stories, essays, and novels, grammar and composition books. All of these genres required a great deal of diversity in reading skills, especially at the inferential and critical/creative reading levels. The teacher, too, had to easily teach varying reading rate according to the purpose for reading because of the wide variety of reading materials used (Robinson, 1975, pp. 189-191).

The English classroom used to feature the study of American literature one year, English the next, with composition and grammar added. Current curriculum represents a 100% change, because the study of English is bases upon an elective system, usually one semester in length. Earlier in the '60's, mini courses in all types of subjects had prevailed, such mini courses being of varying lengths and offered at varying times under modular scheduling. However, these mini courses usually didn't go into any depth in any one aspect of English (Trump and Miller, 1979, pp. 69-71).

Because the mini courses were elective, with no requirements in either American or English literature and because they lacked depth, they are being replaced with electives. With the electives lasting usually a semester, subject matter is gone into in greater depth than was true with the minicourses, and the elective system often has requirements.

Electives frequently are sequentially structured in steps, so that the more difficult courses can only be taken by juniors and seniors, with freshmen or sophomores taking the easier ones. Placement in an elective sometimes is based upon a writing test given freshmen. Students with more advanced sytactic style can take the upper level courses, whereas, those with a less advanced style take the lower level electives. Course offerings can include basic composition, writers' workshop, industrial English, science fiction, reading improvement, art of the film, news reporting, modern literature, mythology, Shakespeare, satire, humor, the art of poetry, magazine writing, and so forth (Trump and Miller, 1979, pp. 71-73).

Activities in elective courses tend to be student-centered, requiring students to read independently. Thus, the teacher has to be familiar with both the student's reading level and the reading grade level of quite a variety of material. The elective system also calls for a wide variety of reading skills, of varying levels of maturity. Pupils can usually read action or adventure literature if their reading skills are at grade level, or not too far below. However, only mature readers can grasp certain types of elective reading, requiring them, for example, to grasp the significance of social problems (Robinson, 1975, p. 195).

In recent years, teachers of English have frequently made use of all the media available--tv, movies, slide-tape presentations, song lyrics, records, and others (Shepherd, 1973, p. 175). However, since texts matching content electives are usually not readily available, paperbacks frequently now replace texts in the English classroom.

Through changes in the English curriculum, the task of the English teacher in meeting the reading skill needs in the various electives is formidable. Because such a variety of media and materials are used, the English teacher needs to be familiar with the reading levels of both materials and students, much more so than in the English classroom of the'60's. Also, since the wide variety of electives calls for all types of reading skills, the English teachers must know how to help students develop all of thses skills.

Science

Science is the content area in the greatest state of flux. The current trend in the science curriculum is to interrelate all the sciences--biology, physics, chemistry, physical science--into one science. This new curriculum stresses observation, discovery, inquiry, and student involvement. While teachers frequently turn to materials other than the textbook, the text is still the main source of information, with the reader required to read figures, math equations, plus printed directions (Robinson, 1975, p. 99).

This new interrelated science is a course for all students to take, not just the superior student, as physics and chemistry were reserved for previously. In the new science, problem solving dealing with today's world is the real focus. "Unified science", or science for all, is part of the liberal arts education stressed today by the comprehensive high school. The inquiry method, or inductive approach, with students reaching their own conclusions, after experimentation and observation (Trump and Miller, 1979, pp. 218-220). The inductive method often requires science students to read a lot of material independently. They may have to adjust to all kinds of reading materials, to compare and contrast several authors, then reach their own conclusions. Thus, pupils may find themselves inundated with books, newspapers and magazines, when they used to only have to read their text (Roe, Stoodt, and Burns, 1978, pp. 223-224). Open-ended experiments often require students to do research (Hafner, 1977, p.28).

Another innovation in the science curriculum is to mix math, math equations, and formulas. Mixing aspects of reading science with reading math makes the reader's task difficult (Robinson, 1975, p. 105).

Reading a science text has always been difficult for the reader because there are sometimes too many concepts on a page, and the concepts are interrelated, often on an ascending scale of difficulty. Science style is terse, with dense factual content. The reader can't skip anything, but must read for the exact meaning (Roe, Stoodt, and Burns, 1978, pp. 253-254).

It's helpful for students to know the concepts through observationand experimentation. Sometimes, getting the relationships between the concepts is difficult, even with good preparation. Having students write summaries, take notes, and outline the written material can be helpful (Hafner, 1977, p. 308).

Even with the unified science curriculum, the reader's task remains difficult because he or she must know the vocabulary, symbols, formulas, be able to follow directions, sequence, draw conclusions, and make critical reading judgments. With the inquiry approach, the reader also has to possess certain skills.

As is true in all the content areas, in the next content area, math, the student often comes to class deficient in reading and in reading skills. Rarely, have they studied reading skills in relation to the content area (Dolgin, 1977, p. 59). And so, on to the hardest content area for the reader to read, mathematics.

Mathematics

Currently, math requires more understanding of its structure and less of its formulas, math models, and representations of ideas and relationships through symbols. Current curriculum changes in math try to unify all of the types of math, stressing concepts fundamental to all types--set, relation, mapping, vector, and space (Trump and Miller, 1979, p. 179).

Major reforms in math somewhat stemmed from the ideas of the Commission on Math of the College Board, this Commission recommending a 9 point program. Later the College Entrance Examination Board surveyed 2,718 seniors taking the College Board Exams. The questionnaire showed that all 9 points of the College Board Commission have been incorporated into secondary math programs. Among these were:

1. Structure and properties of the number system had been studied by 85% of the students.
2. Approximately 90% of the pupils had studied inequalities, along with equations.
3. Indirect proof had been studied by 90%, propositional logic by about 65%.
4. Approximately 95% reported encountering trigonomic functions prior to their twelfth year.
5. About 75% had studied complex numbering systems.
6. The data showed an acceptance of sets as a unifying idea in math (Trump and Miller, pp. 184-185).

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Another innovation in the math curriculum, allowing students to use calculators, has many implications for the teaching of math, because students can do complex problems, ones requiring many steps.

Reading math, especially word problems, has always been difficult for students, and it still is, even in the unified math curriculum. Both the words and symbols label concepts and ideas. Therefore, the student frequently has to read two languages and translate from one to the other (Shepherd, 1973, pp. 251-252). For example, the square root of two minus three, the quantity squared, is quite different from reading $(\sqrt{2-3})^2$.

Reading math requires highly abstract thinking because it is concerned with ideas and symbols, rather than things. Also, math has a highly compressed system of language. It has more ideas on each line and on each page than do texts in any other content area (Roe, Stoodt, and Burns, (1978, p. 264).

Another difficulty in reading math is that readers must grasp concepts, then frequently compute and estimate (Shepherd, 1973, pp. 251-252). Kuhn in 1973 found math symbols the hardest for students to read in any content area (Dolgin, 1977, p. 61).

Math teachers really have to work on teaching vocabulary because it's crucially tied into the concepts. Many times, the concepts are in interrelated clusters. Students must be encouraged to read slowly and to overlearn concepts, because often a concept isn't repeated in the next text, and if pupils don't grasp such concepts, they won't understand anything of what follows (Robinson, 1977, pp. 161-163).

As mentioned, reading word problems is especially difficult for the reader because it requires a procedure of analysis of the process and grasping a sequence of the steps. Often it is helpful to have the reader restate the problem in his or her own words (Hafner, 1977, p. 265). Students can read the word problem then see what is given and what is asked, next decide what process to use, and solve the problem (Shepherd, 1973, p. 256).

Shepherd feels math teachers should have specific training in how to help students with the reading required in this content area, a fact also mentioned by Boyd Holtan (1979).

Social Studies

> "...the main objectives and strategies in the social studies currently are: 'discovery learning'; problem solving; comprehension, rather than memorization of facts; critical thinking; 'investigative' study in the social sciences, and 'inquiry technique' (Aukerman, 1979, p.4).

The social studies of the late '70's concentrates on problem solving in the social science, but Trump and Miller (1979) believe the social studies curriculum should be more interdisiplinary than it is, with geography, history, economics, political science, and others, and their basic principles, intermixed. However, the social studies of the '70's does concentrate on concepts and not memorization of facts; it's theme oriented, and utilizes the discovery method.

Trump and Miller report some blending of the social sciences, with history and geography not dominating the field as they did in previous years. Studying American history one year, then European the next, is definitely being phased out of the curriculum. If history is included in today's comprehensive high school, it is studied using a thematic approach--world wars, civil wars, slavery, and so forth.

Students can have problems reading texts in social studies because a text can be "factual prose, jammed with data." Ideas can be difficult, abstract, and removed from students' experience, with issues that may not be relevant to today. A great deal of Social Studies vocabulary tends to be abstract--anarchy, democracy, colonialism (Shepherd, 1973, pp. 188-190). With concepts so important, the reader must get enough information to support the concepts (Robinson, 1975, pp.128-129).

Although the inquiry method stresses learning concepts, as opposed to masses of facts, reading is still the major way of achieveing information in social studies. With the stressing of the discovery method, the learning of concepts, and problem solving, students must learn how to do library research for information and to note a writer's qualifications and to question the writer's assumptions (Hafner, 1977, p. 221).

To help with the discovery method and concept learning, teachers in the social studies classroom need to provide a wide range of learning options (Kratzen and Manies, 1979, p. 501).

Because graphics convey a lot of information about concepts, readers may need to learn to interpret them, especially since the text writers often don't refer the reader to the graphics (Robinson, 1975, pp. 128-129).

Social studies teachers of the late '70's should use primary sources, as much as they can--magazines, films, paperbacks, and so forth (Roe, Stoodt, and Burns (1978, p. 248).

Critical level reading is very important in reading in social studies especially since current events, such as oil prices, and recession, rule our lives. Students need to learn to evaluate, synthesize, and analyze carefully what they read. The abilities to understand sequences of cause to effect, time lines, and reconstructing the past to learn from it become very important.

Because today's secondary students will become tomrrow's voting citizens, the lesson to learn through social studies seems especially important. This content area is the one where tomorrow's citizens learn about very important concepts to help them deal with their world. Students need to be informed and concerned, yet well able to handle the critical reading skills required in this area, such as propaganda techniques, distinguishing between fact and opinion, and so on.

Now that the four major content areas in the secondary curriculum have been presented, next will come curriculum that not all secondary students necessarily take.

Foreign Languages

The 50's and '60's with the NDEA money coming after Sputnik saw many developments in the foreign language curriculum, including the language lab. Everything was taught in the foreign language, with all communication skills stressed. First students learned to speak and to listen, then to read and to write, in the order that a child learns his language.

Curriculum changes in foreign languages in the '70's have been quite slow compared with the rate of the earlier changes. However, some changes in curriculum are very radical, compared with what was advocated during the early '60's. During that time studying a foreign language in the elementary school was stressed, followed by further study in the secondary school. Now, if a foreign language is studied at all at the elementary level, its purpose is to see if the student might eventually be interested in later language study in the middle or secondary school.

Another change in the foreign language curriculum involves the decision that the audio-lingual method and the use of the language lab advocated earlier didn't really work that well, as shown by research. Now, many fancy language labs have been abandoned because using a tape recorder in the classroom seems to work as well as the expensive language lab did.

Now reading and writing in the foreign language are introduced much earlier in the study of it than they were in the '60's. Reading and writing the foreign language are still regarded as more difficult skills to acquire than are speaking and listening in the foreign language (Trump and Miller, 1979, pp. 125-132).

Another change in curriculum is that a great deal of the repetitious pattern drill formerly popular has been replaced with meaningful dialogue (Hafner, 1977, p. 430). Instead of substitution drills with verb forms changing according to the subject pronouns, now pattern drills include questions and answers.

Instead of a three or four year sequence of foreign language study advocated in the early '60's, now a two year sequence is stressed, followed by electives in the language, should the student be interested in further study (Trump and Miller, 1979, p. 131).

With English becoming a universal language, the study of foreign language is declining. Studying either Latin or Greek especially is dying, due to lack of interest. However, as an elective, many foreign languages will probably remain a part of the secondary curriculum for some time.

As far as reading is concerned, foreign language reading has always been particularly difficult, especially since a student needs to know 95% of the vocabulary as sight words to comprehend completely (Shepherd, 1973, p. 288). In a controlled reader, the 95% knowledge of vocabulary can be built in. However, frequently, students read the same material that native speakers read--news papers, magazines, books--all printed in the native language, with no control over the vocabulary, the verb tenses, etc. Thus, after the first or second year of language study, the reader may be required to read the same material that natives read, and the student of foreign language may not know the vocabulary to read fluently. Thus, one can understand why reading in the foreign language can be a problem, even in readers where vocabulary is controlled. However, reading publications in the foreign language really brings up problems.

What, in addition to vocabulary, makes reading in the foreign language difficult? Interference from the native language, a large number of irregular verbs, different verb tenses, idioms, more inflection, different word order--the list is long.

Students in secondary schools really need instruction in improving their listening-comprehension skills. Learning to write in the foreign language should stress learning phrases, then turning phrases into sentences. One carry-over from the sentence combining techniques used in English to raise syntactic writing maturity is to advocate the same technique in the foreign language. Thus, students practice combining simple phrases and sentences into more complex structures (Hafner, 1977, pp. 429-431).

Teachers need to remain aware of the specialized problems that reading in the foreign language will continue to present.

Art

Only 50% of secondary schools offer art programs, and only 15% of students are enrolled. Most art programs stress studio work, not art history or criticism. Currently there is a trend to offer a wider variety of subjects than drawing and painting. Such things as jewelry, ceramics, photography, graphics, and printmaking are included in the curriculum. The trend is also for aesthetic education, with all of the arts involved, stressing both the cognitive and affective domains (Trump and Miller, 1979, pp. 99-100).

Vocabulary and following directions are two reading skills art students need to know. An art teacher can easily tell if a student can read to follow directions and offer help accordingly. And concepts can be taught through the vocabulary involved (Hafner, 1977, pp. 452-453).

Studying art can be a real motivation to read. Students can learn to solve problems and to study styles (Roe, Stoodt, and Burns, 1978, p. 316). Students may want to read "how to" books independently.

Music

In the comprehensive high school curriculum of the late '70's, music is gaining status and is accepted as more of an intellectual area than it was in the past. Schools are recognizing that all students should participate in some type of music. Courses in music history, appreciation, theory, and criticism have been added to the curriculum in many schools (Trump and Miller, 1979, pp. 110-112).

Reading music in choral music call for two skills: students must read the lyrics and the music. Thus, they need to read words, notes, and directions, then coordinate all of these (Roe, Stoodt, and Burns, 1978, p.317). Music teachers can usually tell the first time students sing a new song who can read the words by watching students' mouths.

Music has a very specialized vocabulary, with many Italianate words, such as andante, forte, and others. Also, with the recent trend to ethnic songs to music books, students must learn all kinds of new words.

Teachers often teach their singers or players how to read music, something that is quite complicated because of lines, time signatures, keys, clefs, notation, and symbols. In choral music this leads to two types of reading: the music and the lyrics. It's a wise teacher who has his or her students read song words first on a separate sheet, teaching new vocabulary and concepts. Pupils can then practice the words without seeing the music. Then the teacher can give students syllebated sheets next, to help them learn the rhythm. When these have been mastered, the lyrics, along with the music, can be presented (Hafner, 1977, p. 465).

Home Economics

The home economics curriculum has undergone extensive changes in the last two decades. No longer is only "cooking and sewing" stressed. Because of changes in life style, with the rise of divorce, adolescent problems, and the disintegration of the family, home economics courses stress the mobile family, multiple parent obligations, and other topics relating to modern life, work, school, and the family and community. Home economics is now called homemaking; courses are often interdisciplinary. The problems of both parents working, skyrocketing prices, drugs, VD, changed sexual mores, alchol commom in the secondary school, a curriculum centered on the home, such as home economics, had to mirror changes in the home and develop a changed curriculum, new courses, and even a new name.

Often homemaking courses are arranged in a sequence of five levels: human development and the family; home management and economics; food nutrition; housing; and textiles and clothing. All of the areas require reading; students are especially interested because the reading deals directly with their lives.

Niney-five per cent of all secondary schools have homemaking programs; with almost 50% of all students taking one or more courses, enrollment is rising (Trump and Miller, 1979, pp. 142-149).

In tailoring and cooking courses, students must be able to comprehend process vocabulary and to follow directions (Hafner, 1977, p. 424). Students have to be able to visualize the finished product.

Students in the homemaking class also have to be able to do a lot of critical level reading, deciding which technique is better, which product is best, what the best buy is, etc. (Roe, Stoodt, and Burns, 1978, pp. 300-303).

Many home economics texts are difficult to read; words aren't defined in context (Robinson, 1975, pp. 222-223). Also , some homemaking reading is terse, technical, and factual, stressing "tools, equipment, and processes." Teachers can do a lot of concrete readiness, teaching the vocabulary (Shepherd, 1973, pp. 282-283).

As home economics is giving way to a homemaking curriculum, so too are reading sources changing. Magazines, newspapers, and other periodicals are making their way into the classroom, especially for the problem solving that's becoming so important. Students need a much wider variety of reading skills than they did previously, particularly at the interpretive and critical/ creative reading levels. Frequently, the homemaking teacher is going to need to help pupils acquire these skills.

Business and Distributive Education

Although enrollment in the business curriculum at the secondary level has always been strong, a recent addition to the curriculum, distributive education, has helped increase enrollment. Under a distributive education program, students are in classes part-time, but spend the rest of their time in employment, sometimes salaried, in their field--bookkeeping, secretarial work, etc.

Another change in the business curriculum is that many new areas have been added--data processing, general business, computer assisted typing, and others. Shorthand has also changed, going to an encapsulated program of one semester for students wanting to learn how to take fast notes in classes.

For other dictation needs, students study notehand or speedwriting. Because many firms teach employees their own systems of bookkeeping, studying it is on the decline (Trump and Miller, 1979, pp. 56-61).

Businees students frequently have a wide range of reading abilities because students with all types of ability enroll. The business teacher typically presents a wide varitey of reading material because he or she teaches so many subjects, calling for a wide variety of reading skills (Shepherd, 1973, pp. 277-279).

Vocabulary must be carefully taught in business classes because the terms have specialized meanings, as well as common ones. Business teachers often give takehome sheets to help students with vocabulary (Hafner, 1977, pp. 387-388). With the heavy load of technical vocabulary, students must read with great accuracy, because even a small error can be disastrous (Roe, Stoodt, and Burns, 1978, p. 297).

Industrial Arts

Industrial arts is a curriculum in need of change because it still features the same curriculum of 15 or 20 years ago. However, one change is that in many secondary schools, industrial arts is a requirement for both sexes, particularly at the junior high level.

Industrial arts in a limited number of secondary schools is a general education course, offering a good balance between science and manipulative skills. Science is included in applying knowledge to problem solving. Perhaps it should be offered this way in all schools. Trump and Miller believe that industrial arts should also develop high level programs to attract students interested in sciences and engineering.

Paul Devore, as mentioned in Trump and Miller, wants industrial arts to become technology education in the curriculum of today's comprehensive high school, providing "a meaningful relationship between technology and culture, historical, anthropological, social, and economic elements of the culture. A technology-oriented industrial arts curriculum has three areas: Production, communication, and transportation (Trump and Miller, 1979, p. 168)."

Reading has always posed a problem in the industrial arts classroom because often the classroom has functioned as a "dumping ground" for the non-academic student, the slow learner, the student with behavorial problems, and others. Thus, the reading range in the classroom is extremely broad.

Another problem concerning reading is that most materials written for the curriculum are at the tenth grade level or above, but the reading level of a majority of the students is far below this (Hafner, 1977, p. 427). Students need help with vocabulary, following directions, absorbing main ideas and details, and interpreting charts and graphs (Shepherd, 1973, p. 282).

Since the texts in industrial arts can be difficult, often the teachers don't use them, instead substituting job sheets with specific directions. To prepare students to read the sheets, instructors also use a great deal of concrete readiness--presenting tools, diagrams, and vocabulary. Thus, the students read with a purpose (Karlin, 1972, p. 307).

Physical Education

Unlike the industrial arts curriculum, the physical education curriculum has changed quite a bit. Physical education now stresses movement education and aerobic conditioning, involving cardiovascular functions. There is a lot of emphasis on motor learning, including psychology, physiology, and other aspects of science. Also, the physical education curriculum includes a wide variety of sports--yoga, sailing, scuba diving, disco dancing, golf, the martial arts, backpacking, and others--instead of just traditional sports (Trump and Miller, 1979, pp. 195-197).

Vocabulary and following directions have always been important in physical education courses, byt physical education teachers often miss the motivation they could give students to read, because there is often such a strong rapport between teacher and pupil (Shepherd, 1973, p. 290).

Because of the current interest in physical fitness, physical education offers another source of motivation to read. People will often read material at a harder level because they want to know the information (Poe, Stoodt, and Burns, 1978, p. 297).

Physical education presents three kinds of writing: facts, how to do something with directions given and suggestions for problem solving. Although there is extensive technical vocabulary, it represents concrete concepts.

In physical education, in reading to follow directions with a particular sport, students soon know if they are right or wrong, due to the feedback (Poe, Stoodt, and Burns, 1979, pp. 285-288).

Adding movement education to the physical education curriculum adds more reading for students, because when psychology, physiology, and other sciences are added, more reading comes into the curriculum.

Observations

With the many curriculum changes taking place in the late '70's in the comprehensive high school, plus the knowledge explosion particular to this time, implications for content area reading have been many. With experimentation and the discovery method taking place in social studies and other areas, pupils must do a different type of reading and other reading needs accompany these changes.

When content areas, such as math and science combine with other curriculum areas, such as in the 'unified science' such combinations bring definite changes in content areas, and, as noted previously, these content area changes ha have implications for reading in the content areas.

Changes in science, math, and English have been major; more change may be needed in the social studies area. In the 'not required for all for a four year sequence' areas, changes, particularly in home economics, have been many. Subsequent changes in reading have occured in these areas also.

The curriculum of the comprehensive secondary school in the late '80's will probably be very different from today's curriculum. Such curriculum changes will affect teaching in the content areas involved, and these differences will also affect reading in the content area classroom of the '80's.

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RESEARCH IN CONTENT AREA READING

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In reviewing the research dealing with content area reading, it was not our intent to ultimately produce a list of research. Rather, we were looking for some aspect of the research at the classroom level that would be of interest to researchers, curriculum supervisors, and classroom teachers. As it turned out, we did not have to search very long, for an important gap in the literature in content area reading soon appeared.

The "gap" involves one of the main (if not central) themes of reading in the content areas. That is, whether and how reading skills should be presented in the subject areas. *That* they should be presented seems to have been settled by Herber's frequently cited notion of "assumptive teaching" (1978). We agree with Herber that teachers should not assume that students are transferring reading skills to other subjects. For most students, teacher intervention is required if we expect them to develop the abilities to deal effectively with their other courses.

The question of *how* these skills should be taught, however, presents a very different situation. On the one hand, there are those who call for the direct teaching of reading skills beyond the elementary level. At the same time, there are those who advocate the content-centered approach. And caught between these two groups are the content teachers themselves, sensing that they could use some assistance, but fearful of the enormous implications inherent in the "every teacher a teacher of reading" philosophy.

With the exception of the disabled reader who often needs additional skill development (Lunstrom and Taylor, 1978), we agree with Vacca (1977) and Herber (1978) and others who favor the content-centered approach to reading instruction in the subject areas. As Marksheffel (1966) puts it, "it makes sense [to teach reading in the content areas] because reading and learning of content cannot be considered as separate entities, but as interwoven learning techniques (p. 160)."

But while we share their enthusiasm for the teaching of functional reading skills, we hasten to add that there is little statistical evidence to support the belief that such instruction results in either improved reading or higher achievement. This situation is explained most recently by Judythe Patberg in the January, 1979 issue of the *Journal of Reading*. Her article, entitled "Validation of Reading Strategies in Secondary Content Areas," builds a strong case for the need to have more research which will investigate the effectiveness of the strategies used to teach reading in the content areas.

In a sense, our paper is a response to and an extension of Patberg's article. We have two purposes. First, we will review the major research which has been conducted on four well-known methods for teaching reading in the content areas. These are the structured overview, study guides, the directed reading activity, and SQ3R. And second, we will identify specific areas and types of research which need to be done in order to validate and refine the teaching of reading in the content areas.

Certainly, one of the richest sources of material in reading in the content areas is that which has emanated both directly and indirectly from the work of Harold Herber. Starting with his own dissertation on the development of critical thinking skills in high school students, Herber and associates have continued to conduct and to supervise research in the use of instructional strategies for teaching content area reading. Two of these have gained special prominence in the field. They are study guides and the structured overview.

Structured Overview

Coined by Barron and Earle (1969), the structured overview attempts to give students clues to the structure of a lesson or a subject before they read it. For example, if we were teaching a lesson on the structure of the American government, the completed overview could be a schematic diagram showing the major components of the three main branches of the government. The vocabulary in the diagram would be selected because it represents the key words as well as the important details, concepts, and principles in a particular lesson. This is, in a sense, Ausubel's "advance organizer" displayed graphically, and it serves two purposes. First, it presents and previews new vocabulary and ideas. And second, it allows the manipulation of these words and ideas so that teachers can provide students with an insight into how the details, concepts, and principles in this lesson relate to each other as well as to that which precedes and follows the lesson.

Barron (1969) was the first to propose the use of the structured overview as an instructional strategy. In his paper, he posited a relationship between the hierachical structure of learning (ideas advanced by Ausubel and Gagne) and the structure of subjects themselves (as presented by Bruner). In the first research conducted on the use of the structured overview, Earle (1973) found no significant differences between experimental and control groups of seventh grade mathematics classes. Estes, Miller, and Barron (1969) found no significant differences when they used the structured overview in a study of ninth grade English classes. However, they did get significant differences with tenth grade biology classes. Their conclusion was that the structured overview seems to be more effective some of the time in some subjects. Not surprisingly, students who used the structured overview were able to relate ideas and concepts to each other better than those who hadn't used it. Used as a pre-reading activity, however, the structured overview has not been shown to be a more effective means of teaching the concepts of various subjects, and Earle concludes by saying that "the area is a fruitful one for research (p. 9)."

What appears to be more promising is the use of the structured overview as a post-reading activity. By introducing it after reading and allowing students to work in discussion groups of two or three, both Barron (in Herber, 1978) and Walker (1975) found significant differences in their students' abilities to understand the concepts which had been presented. Studies continue to try to determine whether the placement of the structured overview or the discussion was the cause of the difference.

Study Guides

Appearing more frequently in the literature is a second teaching strategy which was designed by Herber. This is the well-known study guide. It is designed by the teacher to help students deal more effectively with the structure and the substance of the material which is being presented. Although the various guides will overlap when used in the classroom, they can be divided into four main types: Pattern Guides, Comprehension Guides, Reasoning Guides, and Reaction Guides.

Pattern Guides--The pattern guide is used to familiarize students with the external organization and the internal schema of the material they are using.

1. External organization--this includes the format and physical features of a book. Of concern here are the number of chapters, the table of contents, the appendix, and the type of graphic aids used.
2. Internal schema--the main concern here is with how the writer organizes and presents ideas. Herber lists four:
   a. cause/effect
   b. comparison/contrast
   c. time/order
   c. simple listing

Comprehension Guides--Not surprisingly, comprehension guides constitute the most important part of Herber's work in this area. Not only do they get most of the attention, but they also subsume much of what might come under the other types of guides. Herber believes that the three types of comprehension which students need to master are literal, interpretive, and applied.

Reasoning Guides--These guides are designed to encourage students to exercise their reasoning abilities. Herber warns against fragmenting this skill just so it can be taught. Instead, he encourages teachers to provide their students with the circumstances in which they can exercise reasoning abilities which they've been using. In many ways, reasoning guides are synonomous with the applied level of comprehension; in both, students are asked to make assumptions and to draw conclusions based on material which they have seen, heard, or read.

Reaction Guides--Throughout his explanation of the use of study guides, Herber talks of the importance of one's reactions after reading. In his own text, he teaches by example, for he includes reaction guides at the end of each chapter. By using these, his readers have the opportunity to re-evaluate and synthesize the ideas, information, and suggestions contained in each chapter.

As was stated above, comprehension guides are, by far, the most important of the four, because comprehension is the main goal of reading. As if to underscore their pre-eminance, most of the research relating to study guides relates in one way or another to comprehension. Beginning with his own dissertation, Herber has continued to emphasize comprehension. It is his belief that reading instruction in the content areas should be functional rather than direct. That is, reading should be viewed as a process which the students use in order to understand the content. In this scheme, "content determines process" (Herber, 1978 and Vacca, 1977)

After 20 years of research, however, the question of whether functional or direct instruction provides a more effective way to teach reading in the content areas continues to elude researchers. Herber's own project (which began in 1969) represents the latest and most concentrated investigation of this question. The purpose of the project was to compare and refine various strategies which seemed to hold some instructional promise. As expected, the studies spawned from this undertaking provide the richest source of information in this area. And to the good fortune of those who wish to investigate further, these studies are well-documented in four journals entitled, Research in Reading in the Content Areas. Three which are available are listed in our bibliography; the fourth was just published.

In a word, the results of these mulitfarious studies are equivocal. And rather than present a litany of nonsignificant or partially significant results, we would like to borrow from Vacca and Herber (1977) who state that the results are educationally but not statistically significant. That is, students who have used these strategies seem to have a better understanding of the material. And yet, their understanding is not so great as to be statistically significant.

Thus, after ten years of concentrated effort, Patberg (1979) is able to write, "what is now needed is research to validate these strategies and to compare them in order to determine their relative effectiveness (p. 335)." This reference is not intended to reflect negatively on the efforts at Syracuse. Rather, it is a stark reminder that there is still a tremendous amount of research which needs to be conducted in these and other areas.

SQ3R

The SQ3R method arose from a desire to help students be aware of and employ the aids found in textbooks to alert the reader to important points in the material. Francis P. Robinson (1946) devised the method at Ohio State University and described it in the text, Effective Study, in order to give students an organized approach to studying. The method consists of the steps; Survey, Question, Read, Recite, Review. Students quickly survey (S) the chapter before reading. Careful attention is paid to headings, subheadings, and the summary. This gives students an overview of the concepts and ideas discussed in the chapter. Questions (Q) concerning the chapter are then devised by turning the subheads into questions. The selection is then read (first R) for the purpose of answering the questions. After reading each section, students recite (second R) from memory, the answer to the question. After the entire chapter is read using this procedure, students should take roughly five minutes for a brief review (third R). Major points, subpoints, and important relationships should be emphasized. There have since been many modifications of the method, but basically the original steps have remained incorporated into the modified versions.

In an early study at Ohio State University, Wooster (1953) failed to find significant results in either students' rate or comprehension after training in the SQ3R method. Students did not consistenly use the survey, question, or review steps, and notes were not always in correct form. Wooster felt that students must have adequate practice in order to make the SQ3R method habitual, otherwise the skills necessary for each step are not mastered. The results of Holmes study (1972) also suggest the need for practice with the various steps in the SQ3R method in order for it to be used effectively.

Some research suggests that benefits of the method are due to certain parts as opposed to the whole. In her review of the literature pertinent to the SQ3R method, Okey (1979) cites Gurrola's study (1974), which found that students using only the survey, question, read, and recite steps were more efficient than those using the entire SQ3R method.

The usefulness of the question portion of the method has also come under scrutiny. Rothkoph (1966) and Frase (1967) found evidence to suggest that pre-questions facilitate specific learning, but do not enhance general comprehension. Rothkoph and Bisbicos (1967) concluded that the categories of questions used limited the comprehension and retention to material of similar categories.

Directed Reading Activity

The Directed Reading Activity was originally designed for developing reading lessons from reading textbooks; however, the steps can be applied to content area reading. The objective of this five step process is to develop skill in critical reading.

The first step builds conceptual background. Through the use of discussion, audio-visual aids, and other materials, students are introduced to the concepts included in the reading. Vocabulary words are also introduced and discussed at this time.

A purpose is then set for reading the story, followed by guided silent reading with the intention of accomplishing the set purpose.

The fourth step is an oral re-reading in which students can check their comprehension and ability to locate specific information. Once the specific selection is located, it is then read aloud. A follow-up activity of some type is then used to culminate the lesson.

Research on the DRA technique is limited. Henderson (1963) examined individually formulated purposes for reading in relation to comprehension and purpose attainment. He found that good readers did well in setting purposes for subsequent reading and in attaining the purpose when it was set before reading the story.

Andrews (1972-1973) investigated three prereading activities: cognitive organizer, directed reading question, and a combination of the two. When seventh graders were tested for comprehension of a prose selection, the directed reading question group scored lower than either of the other treatment groups.

Throughout this presentation, we have been stressing the lack of statistical significance. We do not mean to convey the message that this is a desirable end in itself. Rather, it gives us a way to illustrate that no instructional strategy is so comprehensive nor so effective that it is the way to teach reading in the content areas. As we have seen, the final verdict is not in even with four strategies which are receiving the "lion's share" of the research.

What we can be sure of, though, is that these strategies ought to be used, and that more research needs to be done. The research should be of two types, comparative and iterative. By comparing the different strategies under controlled conditions, we can get a better idea of which ones are most effective with which subjects. Iterative (or replicative) research, on the other hand, needs to be conducted so that existing strategies can be re-evaluated and improved.

These studies can be designed to investigate new variables, or they can replicate studies which have already been conducted. They can be done by college faculty, classroom teachers, or by researchers and teachers working together.

In addition to investigating these strategies, it is our hope that teachers employ them. There is no best method; nor is there only one way of using a method. They can be adopted in toto, or they can be altered to fit a teachers needs. Either way, they can be a valuable asset in providing students with a flexible, well organized approach to learning how to learn.

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ORAL FOLK LITERATURE FOR THE SECONDARY CLASSROOM

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Oral literature can play an exciting role in the classroom of any junior high school. It can be compared with other types and genres of literature, used as a basis to study language, and identified as a central focus for the study of the culture, folklore, and history of a certain region or area. Each of these applications suggests a variety of unique instructional techniques ranging from creative dramatics to storytelling to actual student collecting of family tales and traditions, all of which is lengthy enough for an entire article by itself. This present paper, however, does not deal with methodology but focuses on important prerequisites to such procedures: defining oral folk literature and identifying selections of West Virginia folk literature for use in the secondary classroom.

Folk literature contains two broad categories: oral literature and written literature. Oral folk literature consists of poetry and prose created in the mind, transmitted from one person to another or from one group of people to another by word of mouth, and preserved in the oral instead of the written form. Oral folk literature is usually created earlier than written genres in any culture of people, for it is representative of talking, a basic means of communication. Oral folk literature is often labelled under folklore as one of the categories of folk literature since most of the literary pieces have no single authorship. Rather, they are created collectively by the folk or people, transmitted by the folk as delineations of the folk life, and preserved by the folk. Oral poetry in the forms of chants and songs with sparse or no instrumental accompaniment generally develops before oral prose for several reasons: 1. the naturalness in which the melodies fit the rhythm of the sung voice patterns; 2. the easiness in which a poetic piece is memorized with the conventional usage of stock characters and popular expressions, commonplace themes, and verbal repetitions; and 3. the typical shortness in the length of the poetic piece. Oral prose types develop later with longer lengths, more complicated structures, and individualized dramatic presentations.

The greatest single influence in the development of the oral folk literature in any region is the local people of the area. West Virginia oral folk literature, representative of the Appalachian Region, is a potpourri because of the varied inhabitants to this mountainous land. Long before the white men came to these hills, various tribes of Indians, such as the Iroquois and Cherokees and to a lesser extent, Tuscaroras, Shawnees, Delawares, and Mingoes used West Virginia as a common hunting ground and burial ground instead of a permanent living area. The lure of game animals, fish, and salt springs brought many tribes into deadly combat with each other and later with the white settlers. These nomadic scouts left a figurative permanence upon West Virginia by marking many trails, rivers, and valleys with Indian names.

This Indian place naming evolved into oral folk literature as the different tribes told stories of why certain sites were so named. Around the campfires, landmarks were explained in physical imagery and qualities such as bravery and beauty were glorified in story and legend. "The Legend of Seneca Rock" and "The Legend of Monongahela" are two examples in which the tone of love is the catalyst in the courageous but imaginative existence of young Indian warriors. Songs and chants equally echoed boasts of brave hunting feats. Myths were created to explain the workings of natural phenomena, such as "The Iroquois Myth of Creation" in which man first originated on the earth by falling out of a hole in the sky and landing on a substance that became the back of a huge earth turtle. Both vegetable and animal symbolism, native to the land, were embodied into Indian mythology to enhance the explanations.

Indian oral folk literature, then, was created from daily living situations and needs, weaving human emotional themes of love, hate, fear, and pride. It was not only transmitted by word of mouth among and between tribes from generation to generation, but also was heard by the first white men to journey into these mountains, who were receptive to the oral recordings because of the humanistic, self-identifying tones, entertaining quality, and useful knowledge. In turn, with curiosity and vigor they often transmitted the literature among themselves, thus perpetuating and solidifying Indian lore in West Virginia.

The various nationalities of white settlers into the hills gave the most impact to the oral folk literature of the region. During the latter 1600's and early 1700's white settlers began to move away from the tidewater regions across the piedmonts and plateaus into these western hills. A wealth of tales and stories emerged out of these Anglo-Celtic (English, Irish, and Scotch) and Germanic people, who were called the first wilderness explorers, the pioneers farmers, who raised hogs, cattle, and horses; and the Indian fighters. They were strong, fearless, and rugged individualists who prized courage and independence akin to family loyalty and a fierce love of God. With a stoic self-reliance they cleared the dense vegetation, built their cabins, planted their crops, and survived. Besides a grangerized ruggedness, these first settlers also possessed a romantic insight characterized by an imaginative nature, wit and humor, verbosity, and vivid humanism. They were often educated and brought with them into the hills books of ancient history, world literature, and the Bible. All of these qualities helped to convey among these people a rich folklore of culture and tradition, of which the oral folk literature was the most prominent.

The oral folk literature flourished for a number of domestic reasons. The various oral poetic and prose types were expedient and nostalgic instruments to keep alive memories of life in the old world by teaching the young about the past. These oral presentations also served as a basic means of entertainment in the calamity-ridden lives of these mountaineers. After the evening meal, the family members would gather around the open hearth on winter nights or outside under the stars in the summertime to hear the old world tales and sing ballads and folk songs. The art of storytelling was a clever and important talent to cultivate, for a great part of family happiness was weighed on how well kinsmen could entertain and communicate with each other in story and song. The males of the family were the main storytellers on these evenings. During the day as the mountaineer was facing his daily and often weary chores, oral literature was used as a means of making mundane tasks more bearable. Here, the female family members became the storytelling leaders, singing a sad love song or recalling a mysterious legend.

Even though most of the first oral white man's folk literature into the hills was European in origin, collectively it began to wear a new flavor of rugged quality as it interspersed into the now rugged life styles of the people: the wild, free, natural environment; and the rich already existing, examples of oral Indian literature. The old world variants that did survive were slowly transformed by oral transmission to fit the mores of these mountaineers. Unlike written literature whose printed word is permanent as soon as the ink dries, the oral word is as changeable as the individual personality of the storyteller or singer. Many of the flamboyant themes of affluence and sovereign powers were replaced by ones dealing with human conditions and emotions of the mountaineer: 1) the pride and clannishness of the families; 2) the various community activities, such as spelling bees and corn huskings; 3) the sensitive inner emotions of young love, marriage, childbirth, lamented love, sickness, and death; and 4) hunting adventures. Since these people were also sharp-eyed and curious, examples of the unknown, strange, suspenseful, and unexplainable whetted their imaginations. Tales of both the supernatural and preternatural were popular. The humid, misty climate with its patchy valley fogs rising from the river beds into the silenced dawns were often inspirations for spirits and will-o-wisps seen against the morning light or graying dusk. The rolling topography ever changing against the four seasons held mystery in the deep valleys that always reflected the sun's shadow but never the sun. Could that shadow really be the face of an old man or the strange witch lady up the hollow? In time, however, as different religious sects and itinerant ministers traveling through the hills preached against the vice of curiosity in the exotic, many examples of the fairy tale motifs and accounts of witchcraft disappeared from the repretoire of oral folk literature.

Toward the middle of the 1800's a new variety of people began to inhabit the area, affecting the modes of mountain life already established including the oral folk literature. At this time the American Industrial Revolution was beginning to move into these mountains of western Virginia. In the aftermath of the Civil War and West Virginia's statehood, swiftly this area that had isolated the Anglo-Celtic and Germanic migrants for generations was presented to the outside world as railroad tracks were laid across its mountain trails. Soon steam engines wound their way among the hills, carrying out the rich coal and abundant timber that had remained untouched for centuries. Amid the coal beds, natural gas and oil were also mined. Since a massive surplus of manpower was needed to mine these natural resources, much more brawn than the native granger sons could possibly provide, the timing was right for the introduction of cheap labor from western and southern Europe of immigrants who had recently flocked to America in great numbers to escape the crop famines that had plagued these agricultural sections of Europe. They were native to such countries as Hungary, Czechoslovakia, Poland, Yugoslavia, southern Ireland, Austria, Russia, and many others.

Thirty percent of the people were from Italy.

Each new nationality group brought a rich culture and folklore that became perpetuated and preserved among the segregated communities they built. These coal camps and company towns were nestled in the valleys, along the river beds and ridges, close to the natural resource deposits. Their oral folk literature reflected themes of family loyalty, family dominance, pride, a deep love and fear of God, yet a curious blending of superstition with Christianity, to mention just a few, coupled with a deep sensitivity toward human emotions. The oral transmission of old world tales through storytelling was often given a more honored reverence than oral verse typings because the best storytellers were often the oldest members of a family who had learned the tales directly from a European source. The tales were generally retold in the native speech of the nationality, allowing many of the immigrants one of the few means to keep in direct oral contact with their native language since they were learning English in order to adjust to their new industrial life mode. Many of the mining bosses immediately Americanized the foreign names for less complicated bookkeeping, forcing the immigrants to conform outwardly. But, inwardly the stubborn pride and fierce cultural loyalty of these immigrants caused their heritages to be perpetuated. During the working hours the immigrants compromised his individualism, but within the security of his community and home, he lived his native culture, depending on the oral folk literature as an intricate part of that culture. The black people who settled in these western hills also contributed a culture and folklore to the already overflowing pot of heritages. Since the topography and climate in Appalachia were too poor and harsh to grow tobacco and cotton, there was little capital to warrant slavery as an important business. Most of the black labor, therefore, to come into the hills arrived from the deep South after the Civil War, to aid in the building of the railroads. They were treated poorly, receiving commissionary food and one dollar a day with shacks in the "niggertown" sections of coal camps and towns. Their oral literature was rich with songs and chants, created to subdue the drudgeries of the work day. Their themes generally showed a longing for a better life even if this dream could only be answered in the after life of heaven. Yet, they also often immortalized the brave working deeds of their brothers on the railroads in legend and song, such as John Henry at the Big Bend Tunnel at Talcott. Similar then, to all the other inhabitants of these western hills, the black man's oral folk literature also gave them strength and hope, contiguous with an entertaining escape from the many trials of daily living in these mountains.

An explanation of West Virginia oral folk literature can not be complete without an analysis of the specific genres of the literature and a presentation of where the literature can be found for classroom use. The following appendices provide that information.

APPENDIX A

GENRES OF ORAL FOLK LITERATURE

In addition to the major categories of poetry and prose, oral folk literature can also be divided more specifically into three genres:

1. folk songs (the first verses of poetry)
2. folk tales (the first short stories and other prose accounts)
3. verbal lore (the colorful, stock language that accompany both the oral poetry and prose)

I. Types of Folk Songs
   A. Ballad (a narrative song, telling a story)
   The others types of oral poetry contain themes and tones that are represented in the ballad; yet, these songs do not tell a story:
   B. Lullaby (a cradlesong of good night to lull a baby to sleep; also a song of good-bye)
   C. Carol (a song of joy or praise, especially in honor of a special religious event, such as Christmas)
   D. Lament (a song presenting a situation of lost or unrequited love)
   E. Religious Songs (verses and praises for the love of God)
   F. Black Spirituals and Blues (religious praises and emotional verse reactions)
   G. Work Songs (songs of the rural agricultural and industrial workers, depicting their toils and sufferings)
   H. Game Songs (songs ans chants inspired by the sharp wit and humor of the mountaineers, often called "play party games" and substituted for the dancing that was often condemned under the watchful eyes of the itinerant ministers)

II. Types of Folk Tales

A. Fairy Tale (deals with "little people of the supernatural world, such as fairies, elves, spirits, pixies, gnomes, dwarfs, brownies, and leprechauns; they are usually helpful to the protagonist in the tale by performing an act of magic that resolves a human problem or conflict. Many of these tales were lost or disregarded in time through oral transmission, being condemned as evil by some fundamental religious sects in the hills who judged any form of magic as a trait of the devil. In Ruth Ann Musick's Green Hills of Magic, a section entitled "Little People" is devoted to the supernatural world of the helpful fairies, displayed in such tales as Peggy O'Leary and the Leprechauns" and "Friendship of the Wee People." Both are Irish tales.)

B. Legend (a story that distinguishes a person, place, or event, such as those collected by Margaret Prescott Montague in her book Up Eel River; Tony Beaver, one of the characters, is the legendary Paul Bunyon in the lumber camps of West Virginia.)

C. Myth (a tale that explains natural situations, such as the creation of the world, the origins of vegetation, animals, and people and the characteristics of the physical elements; examples of these can be found in the West Virginia Folklore Journal and Richard Chase's collections.)

D. Tall Tales (an exaggerated account, often a "down right lie" of a situation or event, depicting humor and satire; an excellent source is B.A. Botkin's A Treasurey of American Folklore, containg sections on jesters, yarns, liars, and boosters; another good source is the West Virginia Folklore Journal.)

E. Encounter Tales (tales of the supernatural and the preternatural:

1. Supernatural Tales -- involve a situation beyond the normal knowledge of man, characterized by ghosts, spirits, and misty apparitions who haunt the earth for various reasons: to aid a loved one who is still alive, to seek revenge among the living, and to find peace among the living. All four of Dr. Musick's folk tale collections (APPENDIX B) represent the various types of ghost tales in West Virginia.

2. Preternatural Tales -- involve the dark and diabolical sides of the supernatural, such as witches and witchcraft, demons and devils, and incantations of magic, spells, sorcery, and curses. Many of these tales were also banned from oral transmission by several religious sects into the mountains. Dr. Gainer's Witches, Ghosts, and Signs and Dr. Musick's Green Hills of Magic reveal the witch and demonlore of the hills.)

III. Types of Verbal Lore

The content of both the oral poetry and prose contains verbal, narrative expressions and cliches, patterns of words that added to the richness of the oral selections.

A. Proverbs (expressions containing some element of wisdom or commonly accepted beliefs, such as the Italian saying that "the fish stinks from the head on down.")

B. Riddles (a problem or puzzle placed in the form of a question that takes some thought to answer, such as "what has eyes but can not see?" Answer: a potato)

C. Beliefs and Superstitions (a statement considered true if it is labeled a belief or speculated as a truth if it is considered a superstition; to leave an empty rocking chair rocking is an omen of bad luck to the believer but only questionable and curious to the superstitious. Much verbal discourse concerning weather and nature lore, remedies, tokens, omens, family customs, and cookery were accepted as either beliefs or superstitions of the people and became woven into the oral poetry and prose.)

Musick, Ruth Ann, Ed. Coffin Hollow and Other Ghost Tales.
(From an old English superstition that "when a flame burns blue, a spirit haunts the room" Dr. Musick not only entitled this collection but also used the supersition as a permeating theme throught the selections.)

Price, William B,, Ed. Tales and Lore of the Mountaineers.
(Contains legends about Indians)

APPENDIX B

SELECTED WEST VIRGINIA ORAL FOLK LITERATURE COLLECTIONS

Botkin's B.A., Ed. A Treasury of American Folklore.
(A huge volume of stories, ballads, and traditions of the Appalachian people, including West Virginia; Botkins categorizes the types of folk tales, making direct reference to John Harrington Cox's Negro Tales Tales From West Virginia)

Bush, Michael E., Ed. Folk Songs of Central West Virginia. Chappell, Louis W., John Henry.
(Traces the history of legendary oral folk literature hero, John Henry, the black steel driver, who died with a hammer in his hand proving the strength of man power over machine power on the Big Bend Tunnel, at Talcott, West Virginia)

Chase, Richard, Ed, American Folk Tales and Songs and Other Examples of English-American Tradition as Preserved in the Appalachian Mountains and Elsewhere in the United States.

Chase, Richard, Ed. Grandfather Tales.

Child, Francis, James, Ed. English and Scottish Popular Ballads, 5 vols.
(The first scholar to collect and classify the famous Englih-Scottish ballads, 305 in number, many variants of which were orally transmitted over the ocean into the mountains by the Anglo-Celtic pioneers who first settled here)

Cox, John Harrington, Ed., Folksongs of the South.
(Professor Cox was a member of the West Virginia University English faculty for many years where he founded the West Virginia Folklore Society in 1915. The collected oral poetry, verse, and music from the student members of this, then, young society became the fruits for this book.)

Donnelly, Shirley, Ed. The Hatfield-McCoy Feud Reader.
(A series of stories and newspaper clippings dealing with the famous family feud along the shores of the Tug River in Mingo County, West Virginia and Pike County, Kentucky, which were legendized in oral prose)

Gainer, Patrick W, Ed. Folk Songs From the West Virginia Hills.
(An annotated collection representing a major sampling of the people's songs that have survived through the oral tradition: ballads of adventure and derring-do; songs and nonsense rhymes; Negro spirituals, church chorals and fiddle-tunes; and the Child ballad variations of which Dr. Gainer has collected more than any other folk scholar)

Gainer, Patrick, W., Witches, Ghosts, and Signs.
(Containing tales of strange events and witchery, superstitions, folk remedies, and the language of the mountaineers)

Gainer, Patrick, W., Ed. The West Virginia Centennial Book of 100 Songs.
(Sixteen of these songs have been recorded in the record album, Patrick Gainer Sings Folk Songs of the Allegheny Mountains in which Dr. Gainer displays his rich Irish tenor voice and the sparse accompaniment of mountain instruments.)

Gainer, Patrick, W., Ed. The West Virginia Folklore Journal, Fairmont, West Virginia: P.O. Box 446.
(This biannually published journal is the official publication of The West Virginia Folklore Society, containing a variety of examples of oral folk poetry and prose, representative of new collections.)

Jabbour, Alan and Carl Fleischhauer, Ed., The Hammons Family, A Study of a West Virginia Family Tradition. Washington, D.C.: Archive of Folk Song, Library of Congress, AFS L65-L66.
(An album containing oral recordings of members of the Hammons Family remembering songs, tales riddles, and proverbs, from their Anglo-Celtic ancestry in the hills)

Montague, Margaret Prescott, Ed., Up Eel River.
(A collection of the Tony Beaver tales as created in the lumber camps of West Virginia, legendizing a strong hero by the name of Tony Beaver who becomes the Paul Bunyon of the Appalachians and lives in his wonderful lumber camp up Eel River)

Musick, Ruth Ann, Ed. Ballads, Folk Songs, and Folk Tales From West Virginia.
(Rich in the superstitions of the people)

Musick, Ruth Ann, Ed. The Telltale Lilac Bush.
(Containing one hundred ghost tales, mostly from north central West Virginia)

Musick, Ruth Ann, Ed. The Green Hills of Magic, West Virginia Folk Takes From Europe.
(The most complete study available of a collection of tales from the numerous immigrants of western and southern Europe who during the early 1900's sought employment in the coal fields of northern West Virginia)

USING TEEN MAGAZINES IN CONTENT AREA READING

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Teachers in the content areas are often angered and frustrated when someone suggests that they teach reading as well as their subject matter. Content area teachers are not reading teachers--in the sense that we are not prepared to teach students to read when they enter the classroom. However, it cannot be disputed that instruction in the majority of the content areas depends heavily upon reading a textbook or other forms of media. The next logical and professional step is to determine how the content area teacher can aid the student in processing and applying information gained from printed sources. A look at the types of activities appropriate to teaching reading reveals that these activities are easily adapted to any content area and are probably being widely used in some form by most, if not all, content area teachers. These teachers, however, are often not aware that these methods can be extended or adapted to aid students in developing and improving reading and thinking skills.

We propose two techniques that combine materials which capture student interest but are based on sound instructional procedures. Many current magazines deal with topics of intense interest to the modern teenager; having a natural curiosity in these topics, students are eager to read the material and apply that information to their own situations. As teachers, we can relate some of these topics to specific content areas, teach the subject matter, and provide the relevance that is frequently lacking in our textbooks.

The first article cited below served as the material base for which the suggested activities were developed: "Protecting Your Head with a Snell '75" by John Ulrich, Cycle World, May, 1979, pp. 156-7. This article could be used in the following content area classes. Numerous other activities could be developed in addition to those suggested.

Physics - Relate the different tests done on helmets to the laws of physics.

Consumer Math - Discover information relating to purchasing such as testing, consumer labs, and consumer magazines, and comparison shopping.

History - Study the development of the motorcycle and the laws governing them.

Drivers' Education - Discuss safety and laws governing motorcycles and operators.

Speech - Debate or deliver a persuasive speech on the topic.

Journalism - Survey the attitudes of students in the school concerning helmet laws.

English - Research topics related to the articles.

Directed Reading Lesson Designed for a Government Class

The format used for the following activity is a modified version of a Directed Reading Activity. The important aspect of this type of lesson is that it is readily adaptable and can meet the needs of teachers and students in content area classes. An outline of the parts of the lesson is given with brief explanatory notes.

BACKGROUND	Concepts, information, and ideas necessary for motivation and understanding of the article or story are discussed.
VOCABULARY	Words or terms from the article with which the students are not familiar are presented both in and out of context. Models or concrete examples should be used whenever appropriate.
QUESTIONS	Before students read the article. questions are posed in order to guide their reading and stimulate thinking beyond the text of the article.
DISCUSSION	After students have had the opportunity to read the article silently, questions asked previously are discussed as well as others appropriate to the topic.
FOLLOW-UP	Students are given options which will extend their understanding and knowledge initiated by the article. Activities might include research, discussions, experiments, etc. which deal either directly or indirectly with the subject of the article.

Background

Discussion might center around the laws governing motorcycles within the state. Recent accidents involving motorcycles in the local area might also create interest in the article.

Vocabulary

(Words should be selected with the abilities of the particular students in mind.)

laminated fiberglass*
resin*
accelerometer
g's

polystyrene*
delaminate
non-resilient
elongating
aramid*

* Samples of these materials might be displayed in the classroom.

Purpose Setting Questions

1. What are the organizations which develop standards for helmets?

2. What are some of the types of tests done on the helmets?

3. Why do you think the American Motorcycles Association requires helmets for competition?

4. Select 2 or 3 helmets which you would choose if you were buying one. (The article includes pictures and descriptions of several helmets.)

Discussion

Discussion would deal with the questions above as well as the following:

1. Are helmets really necessary?

2. Is it the right of the individual to decide whether to wear a helmet, or does the government set minimum standards for helmets?

3. Should the government set minimum standards for helmets?

Follow-up Activities (Students should choose one or more of these.)

1. Participate in a group discussion of the pro's and con's of wearing helmets.

2. Research and report on specifics of state laws dealing with helmets i.e., history of laws, penalties, etc.

3. Research and report on National Safety Council statistics on highway deaths related to cycles and helmets.

4. Present a video-tape or a school assembly based on the information gained through research on the subject.

5. Sponsor a display of helmets, information, etc. for other students in school.

Extended Activities Designed for an English Class

The second technique proposed in this paper is based on an article entitled "Cults: Are Teens Being Brainwashed?" by Robert Friedman in *Seventeen*, May, 1979. A specific lesson has been developed for an English class, but many of the ideas could easily be applied to a social studies class. A vocabulary list was not included because the words for such a list would be determined by the range of students' abilities in a given class. All of these activities are intended to be a beginning point for the content area teacher; other activities and modifications depend upon the geographical area and available facilities.

In the following content areas other written media could be utilized to supplement the magazine article, such as novels, non-fiction books (including biographies and autobiographies), encyclopedias, pamphlets, newspapers, and magazines. Each teacher must determine the appropriateness of the subject matter with reference to course content, student interest, and community attitudes. The time limitations as well as the practicality of dealing with specific topics in the classroom must also be considered.

Journalism - Study this article from the standpoint of whether or not it is the way to write about a controversial subject.

Speech - Use the article as a take-off for several topics for speech activities, including research and debate, informative speeches, or or panel discussions.

Government - Discuss and study the legal aspects of parental responsibility and rights of children.

Psychology - Research and discuss brainwashing. Investigate human behavior in similar situations. Compare Americans to people of other cultures. Determine the susceptibility of Americans to tactics used by cults to gain new members.

Religion - Discuss different beliefs; compare methods of drawing members; compare philosophical bases.

History - Research American family life during the past 200 years; discuss personal rights of children as they relate to the family unit. Research religious freedom as it exists in the U.S. now and in the past.

Three-level Comprehension Questions

1. Literal level questions
   a. How did Barbara Larson learn about Reverend Moon?
   b. What reasons does the author offer for the appeal of cults?
   c. What was the original purpose of conservatorship laws?
   d. Why have legal arguments charging mind control failed?

2. Inferential level questions
   a. What do you think about factors that have brought about interest in cults?
   b. How do Barbara's and her father's opinions of cults differ? On what does each probably base his/her opinion?
   c. Why might Mr. Larson be justified in

wanting to "deprogram" his daughter? What does this tell us about him as a father?

3. Critical level questions
    a. What is Fieldman's point of view on cults? Is he presenting the pro or con side? Explain your decision.
    b. List ten adjectives used in the article for each side (pro and con) that have positive connotations; now find ten words the author used that are negative. Was one side weighed against the other?
    c. What are some criteria by which an average, middle-class person might evaluate a cult?
    d. How might you and your parents differ in regard to these criteria? (This is inferential, but it follows the thought line of C.)

Vocabulary-Building Methods

1. Groups or individuals could make their own crossword puzzles to be shared with other students in class.

2. Play Hangman with vocabulary words. A student decides upon a word, draws blanks of the chalkboard for each letter in the word. Players guess letters; for each incorrect letter guessed, a limb of a stick man is drawn on the board. If the team cannot guess the word before the stick man is complete, that team loses. This could be extended so that when the word is guessed, the team also must give a definition and/or use it correctly in a sentence.

3. Have a vocabulary bee like the old-fashioned spelling bee. If the teacher pronounces the word, the student must give a definition.

Speech Activities

1. Allow students time to research one aspect of cults, bring their findings into class and share with small groups.

2. Assign the students to prepare and present a speech to inform their classmates of the pros and cons of joining a cult.

3. Divide the class into panels to discuss various aspects of cults.

4. Divide the class into groups of four to debate various aspects of a family unit as it relates to living in a cult.

Debate Topics

1. Should students under 21 be allowed to join cults?

2. Should parents have the right to kidnap their own child if he or she is not yet of legal age?

3. What are the pro's and con's of joining a cult?

4. What are the pro's and con's of developing a family unit in a cult?

5. Do parents have the right to "deprogram" their children who are not of legal age?

Research topics

1. Consider cults in the United States and abroad. What do cults offer in terms of doctrine, practices, and purposes? How do cults differ from each other? How do cults draw members?

2. Determine what mind control or thought reform and brainwashing are and how are they utilized.

3. Study how people are deprogrammed.

4. Do a biographical research on Reverend Sun Myung Moon and his Unification Church.

5. Investigate the physical and emotional effects of an unbalanced diet.

6. Research past cult members in a biographical study.

7. Research Freedom of Mind and Ted Patrick, its founder.

8. Research and discuss the legal ramifications of parents' kidnapping their children to have them deprogrammed. Do laws vary from one state to another? What is the law in your own state?

9. Research the Freedom Leadership Foundation or any other group mentioned.

10. Research cults in your own area or state. What cults are presently functioning in your county or state? What is their basic belief? How do they operate? What do you see as the pro's and con's of these cults? Are they operating within the legal confines of your state/county? What are the pro and con viewpoints of someone who is or has been in a cult you have investigated?

The instructional procedures suggested in this paper have been developed to demonstrate the use of high interest print materials for the development of reading and thinking skills. Content area teachers could well use similar procedures and media to develop classroom activities specifically suited to their content areas and abilities and/or interests of their students. By using these kinds of procedures, content area teachers, although they are not reading teachers, can take definite steps to encourage students to read and think.

TV AND READING: SOME PERSPECTIVES ON THE EITHER/OR MENTALITY

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Things, as they say, "have been poppin" since we made our conference presentation. At that time, we made some rather logical, tenable, and practical claims about the potentially productive results of avoiding the "reading is good, TV is bad" notion which has characterized most public school instruction. In fact, as we will attempt to review below, we see ways in which TV viewing skills and reading skills are not only similar, but perhaps even complimentary.

To some, such ideas as ours are not at all tenable, logical, or even workable--and that is a part of what has been poppin' in the gathering storm of controversy surrounding TV and the teacher. Very recently, Neil Postman has roundly attacked television and, by implication, educators' attention to it, in two chapters of his book, Teaching as a Conserving Activity (Delacourte Press, 1979). And just this month (Nov' 79) Postman is joined by two other critics of television education programs and teachers' concern with TV in the Phi Delta Kappan. At the risk of sounding smug, we are flattered by the attention our cause is being given. That there are now visible critics focusing attention on efforts which encourage the schools to acknowledge TV in our society is, we believe, if not a cause for celebration, at least a type of victory.

Let us, then, briefly outline our "cause" and our perspective on television. Our strongest conviction is that selective, discriminate use and study of commerical television should be a natural and integral part of the school curriculum, because, we believe, through a consideration of television, learning in all subject areas can be deepened and extended.

We will not reiterate all the indications of TV'sfoothold in the American home, nor will we elaborate the obvious--TV is not going to "go away." (Fact is, we would miss it--already this year, our students, and, we think, our students' students, lives have been enriched by such programs as "The Miracle Worker" and "When Hell Was in Season"). Instead, we offer below a brief list of what we think are relatively safe guesses about the concerns of reading experts (which we clearly are not) and ways in which TV can be seen as a curriculum inclusion which addresses those concerns. We have identified ten (often overlapping) concerns of reading teachers, and, for each, we offer questions to consider when watching TV which are consistent with those concerns. Our view is that the questions will help students see television instead of merely viewing it, and, as children become more critical, facile, and sophisticated viewers, many sub-skills in reading will simultaneously be addressed.

1. Skill Development Through Questioning

Language Development and Expansion

Is the language of the story new to you? Is it representative of a particular ethnic or cultural group? How do you know? Are there other language clues that help you to be sure? Can you hear a dialect or an accent? What can you do to identify what you hear?

Did you recognize computer language? Scientific or technical language? Historical terms? What kinds of words can you expect to see and hear in advertising? During the news? During the weather report?

List three new words you came upon in this week's viewing. Analyze their contents.

2. Making Inferences

What does the presence of special equipment or materials tell you?

Do such things as weather conditions, land formations, and uses of daylight and darkness alert you to what will come next?

Are music, vocal tones, facial expressions, and key words helpful in anticipating the next event?

3. Understanding the Developing Sequence of Ideas

Are you aware that information or clues are given in small quantities and build to a whole?

Is it apparent that "A" must occur before "B"? Can you see their importance? Could an event or occurrence be deleted and still provide the same conclusion? Why? Why not?

4. Generalizing Through Recall

As the story develops, are you able to assume what will occur next because the story is similar to others you have read or seen?

Can you support or describe a probable story ending by recalling a series of clues or events?

Is the formula for many stories sufficiently apparent that you can generalize to others?

A - Problem will be solved
B - Conflict resolved
C - Hero conquers evil
D - Teamwork will be necessary

5. Articulating Major Ideas and Themes

Can you restate the major idea of the story in your own words? In a few sentences?

If the story or documentary contains a moral or direct message can you briefly rephrase it? Can you apply it to a real life situation?

Can you retell the story in less time than it took to view it? Are you able to identify only key points or ideas and summarize?

6. Anticipating Plots: Projecting

How many times in a story can you predict what will happen next?

At what point in the story were you able to predict the ending?

What alternative endings did you consider in making your choice?

What clues and details do you recall which enabled you to guess what would come next or how a story would end?

Why are some stories easier to predict than others?

7. Means of Character Development

What did you learn about the character (values, beliefs, etc.) of a person in the story through his or her actions in the story?

What do you learn about a person in the story through his or her dialogue?

How do stories take us inside another person's mind or enable us to "relive" another person's past?

8. Determining Scientific and Historical Accuracy

What are three new "facts" which you learned as a result of this viewing experience?

Identify two points of information (facts) from the story you wish to "check out." What could you do to determine the accuracy of information?

In what ways, if any, does the writer take liberties with, distort, or misrepresent what we know from history was true or what we know from science is possible?

What can you cite as examples of a writer making assumptions about the audience's knowledge of history or science?

9. Analysis of Rhetorical Strategies

Can you find examples of a person using carefully controlled and carefully selected language to his or her advantage?

In "Fiction"?
In "Non-Fiction"?

Can you find in what one person says about another or in what a narrator says about an event--an example of one unsupported generalization and of one generalization which is supported by specifics?

Loaded Language?
Bandwagonning?
Appeals to Authority?
Non-Sequitors?
Smoke-Screening?

10. Expansion Activities

List one area this experience has made you think more about or want to know more about.

Name one person who you feel would be the best possible person to share this experience with or talk with after the experience.

Identify one place you would like to go and one thing you would like to do as a result of this viewing experience.

Who--and what--could you write as a result of this experience?

What could you imagine reading more about as a result of this experience?

Same author?
Similar themes?
Similar people?
Same period?
Same area of inquiry?

Teacher - Developed Viewing Guides

Beyond the general awareness of the possible relationship between reading concerns and thinking critically about television, we advocate a more specific weekly strategy for teachers' use. This strategy, the development of "Valuable Viewing Guides," is designed to call students and their parents' attention to programming which can generate critical thinking, language experiences, and purposeful (as opposed to purposeless) viewing in a given week. We rely only on TV Guide for the information upon which the materials in our teacher-make guides are based. We have four objectives in designing the guides:

1) to call attention to quality programming which can be integrated into and enhance course concerns;
2) to give students a reason to view selected programs;
3) to provide students with questions to consider while viewing;
4) to suggest ways discrete and select viewing experiences can be expanded upon.

The following samples suggest what such guides might look like. In a typical week, we would preview 6 - 10 programs, from series episodes, to movies, to special programming in much the same fashion:

"Little House on the Prairie", 8:00 Monday, Channels 6, 7, and 11.

In this episode, the Ingalls family is forced to move to the city. What feelings do they have about the move? What adjustments do we see the family forced to make? How do the characters react differently to the move?

What does this episode suggest about the problems of small farmers? Why aren't there as many farmers as there used to be? What changes in lifestyle do the children have to make? How is city life portrayed in this episode? How do the writers make points about the advantages and disadvantages of the city and country life?

Do you know anyone who has moved from the city to the country or vice versa? Do you suppose anyone had ever written anything about the forced mobility of the American family? What are some ways our values and lifestyles have changed as our nation has become more and more urban? Does this episode of "Little House" treat a historical trend fairly, accurately, and sensitively? Why or why not? Or, how might you find out?

"Clone Master" NBC Thursday Movie, Channels 6, 7 and 11.

What is "cloning"? How close do you believe science is to cloning human beings? Before viewing the movie, consider how you feel about man's potential to clone. Just because we may be able to clone, should we?

How much of the movie is truly "science fiction" and how much of the "science" in the movie is based on what is currently known or presently possible in the field of eugenics? How would you describe the tone of the movie? Would you call it comic, serious, or a little of both? Would you consider the movie escape and adventure viewing, or does it raise fundamental and important questions about cloning specifically and the future of science generally?

The library may have a copy of Future Facts. What does this book predict that is already "accomplished" in the movie? How does the movie "Clone Master" contribute to general knowledge of cloning potential? Does it take liberties with science--and does the movie only confuse or obscure serious questions currently facing scientists?

Conclusion

We believe teachers not only have a responsibility to acknowledge the existence of TV in our culture and to work toward its more productive use, we also believe that in so doing, the more traditional concerns of the curriculum can be addressed. Critical thinking is critical thinking, whether it be about a chapter in a Special Report, or an episode of "All in the Family." That our students watch so much TV so uncritically is, indeed, a cause for concern.

Mindless encounters with information presented through one medium may, indeed, influence students ability to process information through another medium. The time to consider how more critical reception through medium A (in this case, TV would facilitate reception through medium B (in this case, reading) may be long overdue.

PUPPETRY EDUCATION IN THE CONTENT AREAS

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Puppetry is an ancient and universal art of human expression, a natural integrator of all the languages of communication and creativity. It has long been a potent force in nurturing those thought, communication and creative processes valued by educators. The puppeteer reads and analyzes literature, writes original scripts, adapts literary selections to dialogues, perfects oral and kinesic interpretations, paints and sculpts puppets, sings, dances, thinks much and listens well. He or she is intensely involved in exploring real and important questions of content and process and in discovering their solutions. In essence, the puppeteer reflects many characteristics of effective learning as he goes about the business of creating, communicating and thinking. It seems logical, then, that the power of puppetry might be tapped by teachers of all disciplines.

Through an exploration of the possible applications of puppetry in the classroom I developed a model and program of puppetry education which I implemented in language arts, social studies, natural science, mathematics, music, art, health and physical education classes. The model evolved through extensive comparison of research and writings in puppetry and various disciplines. Essentially, this investigation revealed puppetry's power to realize the fundamental goals of the content areas in three focal areas--knowledge/communication, creative expression and self-realization.

The program of puppetry education I designed involves a set of instructional modules in the curricular areas. While the program synthesizes the findings from the literature cited throughout model development, it encourages creative play, experimentation and discovery. The modules illustrate the unique ways in which puppetry education can achieve goals in the content areas.

Types of Modules Developed

Variations of some of the modules were developed at several grade levels; others, at one level only. One of these modules developed with variation from first grade through college is "Sensory Awareness, Play and Metaphor." In this module students' awarenesses of the close relationship among sensory experiencing, play and "the play" were piqued. Bodies, minds and emotions merged in creating expressions of experiences. Metaphoric thinking, grouptalking, writing and kinesics were introduced. Students perceived new dimensions of themselves as creators, poets, artists and puppeteers.

Students explored the ways in which the new/unfamiliar/unknown might be discovered through sensory experiencing of the old/familiar/known, and vice versa. After an environmental walk in which all senses were brought into play, they applied mediatation-inspiration-creation to visualize metaphors experienced, then wrote altogether and individual metaphor poems for publication. They pantomimed their poems, played "mirror" and "car wash," and then created large masks of keys to their metaphors. Finally, they designed an altogether puppet drama of their metaphoric experiences and performed their plays to mood music.

In science groups, writing, grouptalking and editing focused on plants, animals and climatic conditions; in social studies, on geography, politics and human interactions; in language arts, on poetic form and metaphor-simile creation.

Another module developed at all levels is "The Ancients and the Muppets." In language arts, emphasis was on developing understanding of thematic motifs, character representations and plot symbols. In social studies focus was on interpreting history, politics, religion and philosophy from the vantage point of the masses.

Grouped in threes, students read and analyzed fables of various cultures through readers theatre. Then they assumed the roles of fabulists by creating modern fable plays from the social problems of real human dramas. They recreated dialogues inferred from mounted pictorial human dramas and from political and historical readings. Together each group pantomimed, designed muppets, and perfected oral-kinesic interpretations. Plays were performed through an open-proscenium stage, enabling players to sit within its frame and communicate with the audience. A learning center was then developed.

The Spanish puppetry module was also developed at several levels. In threes, students improvised and wrote dialogues for a set of sense impressions and human dramas involving Spanish families, and then performed these with marionettes. Dialogues were edited, revised and expanded for publication, and then played by other groups.

A number of modules were designed for specific classes and levels. One, for a high school home economics class in child care, focused on playing out real-life situation dramas involving baby-sitting problems through puppets.

Characters interacted to direct dialogues toward desired solutions through improvisational problem-solving and discovery. Large-grouptalk critiques of resolutions led to small-grouptalk sessions which resulted in written revisions of improvised dialogues.

A sixth grade health class studying oral hygiene created furry muppets representing diseased and healthy teeth, bacteria and toothbrushes, and then wrote, edited and interpreted plays illustrating the battle among them.

A gifted and talented sixth grade in an inner city school transposed folk literature to scripts, edited these through dynamic grouptalk, then designed unique oral-kinesic interpretations for original rod puppets. They performed their creations for primary classes in their and neighboring schools and for my college groups.

A ninth grade business methods class read and analyzed advertisements, applied meditation to situation problems involving creation and marketing of products, and then wrote television commercials to sell their products. Critiquing and editing scripts led to designing human puppets and presenting commercials to peers in a studio setting.

In a social studies module seventh grade students improvised some real-life situations, then wrote a series of plays about the intercontinental explorations of noted pathfinders and adventurers. Muppets were designed from athletic socks; oral-kinesic interpretations, from research of foreign dress and life styles.

Groups of middle-grade students with various learning disabilities experienced their first sustained creative effort in a puppetry workshop in which they designed sock muppets, played out human dramas, and interpreted social situations from math to music.

Sixth, seventh and eighth grade classes in religious education read and transposed Bible stories to dialogues, made glove puppets and presented their creation to other Christian doctrine classes.

Outcomes

Throughout development of each module certain aspects emerged as particularly effective in leading students to more advanced levels of thought and language:

1. Grouptalk. As students grouptalked play content, puppet characterizations, and oral-kinesic interpretations, they read, researched, and analyzed content material, evaluated one another's ideas, thought through problems of writing and interpretation, and discovered solutions through planned experimentation. Verbal and written play with possible themes, characterizations, problems, diaglogues and actions provided "rehearsal time" for new words and ideas and thus motivated free expression and thought (Cottrell, 1975).

2. Editing. In editing their own and one another's writings and interpretations, each group was immersed in much communication, word play, thinking and research of real and important problems. Students debated the accuracy and fluidity of dialogues, synthesizing new ideas and creating new lines and scenes.

3. "Play" and The Play." In each module "the play" was a culmination of much "play" with sensory experiences, ideas, emotions, words and materials. Playing with ideas during grouptalk, writing, editing and interpretation provided opportunity to think imaginatively and expansively, to explore many possibilities, to create without criticism and limitations, to problem-solve freely. Constant play with meditation-inspiration-creation provided continual stimulation of communication and thought processes.

4. Performance. All students expressed strong need and desire to perform, to share. They had invested great amounts of their intellectual, emotional and physical selves in research and communication and wanted recognition for their creative energies. Performance brought their work and play to a satisfactory close (Valentinetti, 1977). It permitted closure, the sense of the completed expression, of being creator and artist. "The play or show culminates the activity, thus eliminating the fragmented or partial experience, so commonplace in education" (Mattil, 1971).

5. Publication. Their writings in print seemed a strong motivational factor to all students. That their peers would read and interpret, and then play out, their writings, and that they could read and play out their peers' writings, intrigued them. Like performance, publication represented a final stage in creation and expression of thoughts and knowledge, a snythesis or gestalt. It became an important and valuable purpose for, and result of, research.

6. Reader's Theatre. As students took responsibility for reading orally parts of narrative and dramatic literature, they were involved personally in content material and thought processes necessary for its interpretation. It provided realistic and enjoyable means of experiencing content material through all domains preliminary to "doing something with it" (Moffett, 1967).

7. Literary and Technical Language. Through much verbal and intellectual play during transposition of content materials from text to script, students made the language of those materials their own. They seemed to like the taste and feel of new technical and literary language--and utilized it constantly in their communication. "... the dialogue one participates in becomes internalized in oneself" (Wagner, 1978).

8. *Active - Expression and Passive - Reception.* In developing their plays all groups of three found themselves equally engaged in active expression of their own ideas and feelings and passive reception of others'. The process of preparing content material for puppets and plays wholly engaged each individual naturally in creating expressions of his research and experimentation. He flowed from passive reception of others' ideas and feelings to active expression of his own easily.

9. *Integration.* Each module engaged the student's whole being--senses, imagination, intuition and intellect. Body, mind and emotion--cognitive, affective psychomotor domains--naturally merged in the transposition of content material to drama, making learning a whole rather than a fragmented process. In researching, designing and performing, the puppeteer's imagination was kept alive, cultivated through constant manipulation of basic knowledge in the process of creative expression. Creative as well as critical thinking, intuitive as well as analytical thinking, creative problem-solving as well as scientific method were evoked as he or she worked.

10. *Intuitive/Organic Learning.* As the students played with writing, editing and interpretation problems--and discovered solutions --they acquired both content and process intuitively, without isolated and unrealistic formal instruction (Moffett, 1973). The complex integrative process of play, experimentation, interaction and performance led them to intuit vast content knowledge and the communication processes essential to its expression. Research leading to performance inspired them "... to seek facts, information and materials which provided new relationships and meanings" (Green, Petty, 1967). Their learning was natural and organic as they freely satisfied their basic human needs to communicate what they had internalized from their experiences.

11. *Realization of Self.* Involvement in the reading, thinking and communicating processes essential to designing puppet-dramas led the students to many new understandings of themselves, others and their environs. Developing new ideas and receiving positive responses to their expressions revealed to them new potentials, increased self-concepts and expanded respect of others' knowledge. As their abilities to express their ideas and feelings effectively increased to ever higher levels they attained greater self-realization.

12. *Playing Out Human Drama.* All groups discovered that playing out human dramas and conflict resolutions in writing and interpretation provided realistic experiences and unique insights impossible through other means. It provided that "...under-the-skin learning which enables students to try on life and to experience the feeling of another role" (Shane, Reddin, Gillespie, 1961).

13. *Meditation.* The meditation-inspiration-creation process provided a quiet time for crystalizing ideas and emotions before writing, structuring and performing. Students meditated, visualized outcomes, organized thoughts, and then created (Miller, 1976).

14. *Kinesics.* As the students involved their puppets in silent dialogues and physical interactions, their own oral, kinesic and written expressions became increasingly more inventive. Something about manipulation of puppet Kinesics stimulated ever greater inventiveness and more creative written and oral language. Perhaps "...puppetry enables people to say what they desired to say in real-life situations but did not in fear of disapproval or outright reprisal or both" (Coody, 1973).

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MOTIVATING LEARNERS TO GREATER EFFORT

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Learning is the continuous unfolding of a person's latent abilities through the constant acquisition of skills, information, and new experiences. As such, it is dependent on at least three factors: motivation, activity, and environment.

As you will note, I have placed motivation first. Most of us have found that students who really desire to learn will do so. Those who are apathetic, improve very little regardless of teacher effort. True learning cannot be forced. First, there must be a desire, then appropriate activity, and, finally, an adequate environment. Motivation to learn, however, does not stop with student motivation. Educationally, the process is not complete unless parents, teachers, and children are all motivated.

Activity, the second essential, applies to all types of learning. Activity, in a sense, depends upon motivation; however, it can also incite and sustain interest. It is through the selection and use of different activities that particular aspects of learning are emphasized. I am sure that much of your discussion of methodology will hinge upon selecting appropriate activities.

Environment, the third factor, is a major conditioner of learning. By manipulating the environment, parents and teachers can exert powerful influence on the rapidity and permanence of learning. The community, school, and home surroundings, all tied closely with motivation, do much to shape the learning pattern of the child. Through adjusting, changing, and deliberate planning, the environment can become a forceful agency in assuring adequate total development of the child.

This specific discussion is based on the first factor, motivation. Let's look more closely at this essential ingredient in learning.

Motivation is the desire to learn; to engage in an activity; to achieve a desired goal; to be successful in something. It is motivation that pushes us to greater effort, helps us to overcome obstacles, and, generally, makes life more worthwhile. One shortcoming in the motivational efforts of the schools is the tendency to think of motivation as applying only to the students. This is only a part of the problem. To secure really adequate motivation for learning, parents and school personnel as well as students must be motivated.

Parents are apt to lose their enthusiasm for their children's learning as the pupils grow older. Note the difference in the enthusiasm for teacher conferences, PTA activities, and classroom visitations between parents of first grade pupils and twelfth grade students. When parents show excitement because "Little Mary" has learned some new words but have nothing to say about the new equation "Brother John" has learned to solve in algebra, the effect is demoralizing to Brother John.

Teachers occasionally live for the end of the day, the week, and the year. The common expression, "Thank God this is Friday," fits many of us more than we would like to admit. We sometimes follow our daily plans in a mechanical manner, sometimes with our mind on personal problems totally unrelated to the subject or to the students we are supposed to be teaching. When this condition exists, students have lost their second greatest incentive to learn--the enthusiasm of a dedicated teacher.

Apathetic parents, bored teachers, and the seemingly universal dislike of outside restrictions converge to dampen a student's natural curiosity and desire to learn. Students then invent all manner of excuses to evade assignments, engage in teacher-demoralizing activities, and, generally, enjoy anything which distracts from the attainment of teacher objectives. The result: academic achievement declines, students drop out of school, parents criticize the school system, teachers criticize the parents, and citizens vote against school levies. All of this tends to paint a bleak picture for teacher hopefuls in the colleges and universities.

This trend can be changed. But it must come through a universal attempt to secure motivated parents, school personnel, and students. This is not an easy task, but it is a possible one. Let's examine some of the many techniques that can be used to secure a more interested and enthusiastic group of parents, teachers, and students.

Motivating Parents

Parents are interested in the achievement of their upper grade and high school students. However, it is more difficult for them to express this interest. It can also be hard for parents to realize the value of what students at these levels are learning and the necessity of their own involvement in what the students are doing. The following techniques have been used successfully to motivate parents to greater involvement in the learning scheme. All of them can be utilized by school personnel.

1. Helping parents recognize the value of learning to the students.
2. Explaining to parents how their expressed attitudes affect the upper grade and high school level students.
3. Encouraging close contact with the school and teachers.

Motivating School Personnel (especially teachers)

School personnel--principals, supervisors, and teachers--are only human. They become discouraged, bored, and disinterested just as do people in other professions. It is very difficult to maintain enthusiasm for a task when it seems that no one else is interested. But to maintain personal sanity and acceptable student environment, school personnel must make an effort to remain enthusiastic about their school, their subjects, and their students. Unfortunately, there is no agency for motivating school personnel. It has to be a self-help project. Some aids for attaining and maintaining interest include:

1. Administering a school program so that teachers feel they have a direct part in it.
2. Making supervision a cooperative endeavor, with increased student achievement a common goal.
3. Developing a desire for high scholastic achievement among those who are capable.
4. Cultivating an interest in personal teaching success.
5. Becoming absorbed in subject matter and learning its true value for students.
6. Finding joy in individual student improvement.
7. Developing an interest in trying new techniques.

Motivating Students

In the final analysis, all techniques for motivating parents and school personnel serve indirectly as motivational approaches for students. In addition, several direct approaches may be used to incite, increase, and sustain student interest. These can be classified under two headings: parent motivation and school motivation.

Parent Motivation Motivation begins in the home. If it is absent, the teacher's task is doubly difficult. Parents who have a real interest in increasing their children's desire to learn can do so by:

1. Giving open support of the student in all learning activities.
2. Expressing interest in what the student is doing.
3. Demonstrating parental recognition of the value of a time, place, and materials for study.

School Motivation Motivating students is one of the most difficult tasks of the school. It involves personal relationships, the selection of appropriate activities, and choosing or creating an environment conducive to learning. The following are examples of the kinds of techniques that administrators and teachers can use to create and sustain interest in learning.

1. Organizing the school as a working laboratory for students.
2. Providing flexibility in assignments, classwork, and evaluation techniques.
3. Showing enthusiasm for what you are teaching.
4. Working *with* the students--not having them work for *you*.
5. Applying what is being taught to current problems or interests.
6. Giving individual help with any important skills or concepts that are difficult.

Learning is complex, but it can be regulated through providing adequate motivation, appropriate activities, and a suitable environment. As you study the various techniques for developing reading skills through subject matter teaching, ask yourself this question: *Does this technique enhance learning through inspiring increased interest, encouraging appropriate activity, and expanding the student's background?* If it does, it is likely an effective approach. If it does not, revise it until it does.

COMMERCIAL TELEVISION: MOTIVATOR FOR READING INSTRUCTION

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Much has been written recently regarding the apparent decline in the success educators have had in teaching young people to read. Many states, partially in response to the decline in Scholastic Aptitude Test (SAT) scores, have instituted "competency examinations" as a prerequisite to graduation from high school. The phrase "Back to Basics" has become commonplace, if not clearly defined. Accountability has emerged as the watchword in education. All educators, and especially reading educators, should be aware of the current discussion and debate in this area.

Many people--both critics and supporters of current reading instruction practices--believe they have found the "solution" to the problems of the reading educator and are not hesitant to advance their positions. Unfortunately, none of these "solutions" has yet been proven as the cure for all of our ills.

To a large degree, the failure of these "solutions" to meet the needs of all students and teachers results from the fact that students and teachers are human and, therefore, do not always lend themselves to the scientific and empirical methodologies which are at the foundation of many of the so-called "solutions." One result is that experienced teachers know that they will teach more and achieve a higher success rate when they use an eclectic approach, in other words, a variety of approaches, techniques, and materials to teach reading.

The purpose of this paper is to propose that one more tool be incorporated within an eclectic approach. That which is proposed is not intended to be the cure-all for reading problems, but simply is an additional way to motivate students to read, because it is believed that the best way to develop a skill is to practice it frequently.

In a recently published text (Herber, 1978) concerning reading instruction and the content areas, the author of that text contends that "most so called 'can't' readers really are 'won't' readers "(pg. 175). He indicates that the problem for content area teachers is not one of motivating students to learn because students are highly motivated to learn; they simply are not always motivated to learn the traditional curriculum in the traditional manner. Herber does not place himself among those who would advocate allowing students to choose their own courses of study because he states, "There is amply evidence to demonstrate that the current curriculum can be made relevant if students can be shown how it fits with what they already know and how they can use what they learn" (pg. 175).

Assuming that Herber is correct in his conclusion, the problem for all teachers, not just content area teachers, becomes one of stimulating and motivating students to the degree that they can apply what is being taught to the world around them. There is nothing new or radical in this philosophy. However, it does raise a question concerning the choice of materials and approaches best suited to accomplish this goal.

Obviously, the material and approach used to meet the aforementioned goal should be within the background experience of the students. They should be relevant to the interests of the students and be presented in such a way that they are non-threatening. They must be related in a manner which the students can identify as being practical, current, and of value. It is proposed that commercial television affords teachers an excellent opportunity to meet both the needs of their students and the criteria demanded above.

Liebert, Neale, and Davidson (1973) state that "literally hundreds of studies have focused directly or indirectly on television and its effect on youngsters since the 1950's . . ." (p. xv). However, most of these studies, according to Winn (1977), focus on the single issue of "the effects of viewing violent television programs" (p. 65). There is precious little in the literature concerning commerical TV programming and its relationship to reading. There has been even less time and energy devoted to the study of the relationship of commercial TV programming and reading instruction. The bulk of the literature centers on viewing habits and program content that advocates aggression, violence, and anti-social behavior.

Even though little research has been reported regarding the relationship of reading and commercial TV viewing, it is apparent that pre-school-age and school-age children watch a great deal of TV. Waters (1977) cites some disturbing statistics and makes implications as to the potential effect that televiewing has on young people when he states:

> According to A. C. Nielsen, children under 5 watch an average of 23.5 hours of TV a week. That may be less than the weekly video diet of adults (about 44 hours), but its effects are potentially enormous. Multiplied out over seventeen years, that rate of viewing means that by his high-school graduation today's typical teen-ager will have logged at least 15,000 hours before the small screen--more time than he will have spent on any other activity except sleep. And at present levels of advertising and mayhem, he will have been exposed to 350,000 commercials and vicariously participated in 18,000 murders (p. 63).

Perhaps the most tragic result is that time spent watching TV detracts from time which might otherwise have been spent reading. As Winn (1977) states, "There is no doubt that children read fewer books when television is available to them. A child is more likely to turn on the television set when he has nothing to do than to pick up a book to read . . . . " (p. 57)

Commercial TV is a potent medium which, in less than three decades, has reached a position of influence which rivals the traditional institutions of home, church, and school for the attention of our citizens, both young and old. While educators are concerned with all citizens, children are of primary interest to reading educators. Obviously, teachers must find a way to use children's interest in TV in a positive and constructive manner.

How might this be done? Although very little has been published which could be classified as a direct, practical aid to the classroom teacher who wants to make the most effective use of commercial TV in reading instruction, some materials are available which contain specific references and suggestions.

One such material is *Television and the Classroom Reading Program* (Becker, 1973). This is a booklet containing suggestions for the utilization of TV when teaching language arts skills. It also calls attention to two periodic publications--*Television Most Worth Watching* and *Teachers Guides to Television* which, according to Becker, can aid in planning TV supported instruction. Becker states that these publications are available at nominal cost and can be obtained from: Television Most Worth Watching, 3244 Wisconsin Avenue, Berwyn, Illinois 60402, and Teachers Guides to Television, Box 564, Lenox Hall Station, New York, New York 10021.

An article by Adams and Harrison (1975) suggests twenty specific TV activities which can be used or modified by the classroom teacher for instruction of specific reading skills. Hutchison (1979) in another article presents a learning model for watching television which he believes "motivates the student and then directly relates his weekly television programs to his classroom instructional experiences" (p. 237).

Several activities, designed by the author, are listed below. These activities are designed so that most students will be able to carry them to conclusion with a minimum of assistance from the teacher. They are not intended to be complete, but rather ideas to stimulate the development of additional activities by teachers and students.

1. Note the frequent statement accompanying a television movie, "Based on the book ? by (author)". Read the book, and report on the closeness of the TV adaptation to the book.

2. Write a personal review of a TV show or movie, and compare it with that of a professional critic as found in the newspaper or magazine.

3. After watching a movie or TV show, note where it was filmed in the credits and determine if the filming location accurately depicts the film's setting.

4. After watching a show on TV, write a different ending that could have happened based on the content of the show.

5. Listen for and record figures of speech used on shows. Then write the two meanings of the figures of speech, the literal meaning and the figurative meaning.

6. Record in writing any printed material, phrases or words seen in programs or on commercials. These familiar phrases can then be used in the classroom for the development of word recognition skills.

7. While watching a news show, take notes for a particular story. Then find a newspaper or magazine article on the same story. Read it and compare the two forms of presentation. In some cases this can be reversed by reading the story and then synthesizing it down to a TV script with a description of the film footage that might accompany it.

8. Compare for accuracy and similarity the weather forecast for the same area and time from the newspaper and TV.

9. After watching a sports event on TV, write it up as a sports reporter would. Compare the report with the local paper's report.

10. Using the content of your course(s) for questions and students for contestants, establish game shows such as seen on TV. Students can become involved by writing questions as well as participating as contestants.

11. Read the blurb in the TV listings describing the content of a particular program. Watch the program to see if that which was described takes place. This may be extended by requesting students to write in their own words what they expected before watching and what they eventually saw in the program.

12. Reverse the procedure for number 11 above. Watch a program, write a blurb of your own, then compare your blurb with the one in the TV listings.

13. Categorize commercials according to propaganda techniques, i.e., glittering generalities, bandwagoning, plain folks, transfer, name calling, testimonials, card stacking, etc.

14. Write commercials extolling the value of your content area in the format of the more popular TV commercials.

15. Write a script for a TV program. If deemed worthy, send it to the producers of the show. It can cost no more than postage.

16. Note the basis for authority in the presentation of a documentary. Read more in the area discussed in the documentary to see if it was accurate and thorough.

17. Research a particular subject discussed in a documentary or "talk" program to see if you can write and support an opposing point of view. Remember, almost everything has two or more sides.

18. With a TV listing of upcoming programs, plan a televiewing schedule for a day/week/month.

19. Play a trivia game whereby you **make-up** questions concerning remembered TV programs which are no longer on the air. The value to reading results from the research and documentation of the questions.

20. Write a report or biography on a favorite television personality with appropriate documentation.

21. With a list of upcoming TV programs list programs which contain content related to your subject area and a description of how it is related. Students can categorize programs by areas of curriculum interest if desired.

22. Identify "bloopers" on TV shows which are technically wrong and related to your content curriculum. For example, an old Bonanza program showed Ben and the boys loading bales of hay when the hay baler wasn't invented until after the circa of the show.

23. Re-write TV schedules as you would like to see them written.

24. Write or present the material from a reading assignment as a television newscaster might report it on TV.

25. Rank your favorite TV programs and then compare their rankings with the national rankings. Rankings could also be compared among students.

Television can be a distraction from reading for students when it is allowed to remain a passive activity. It can, however, be a tool for learning when utilized with appropriate teacher supervision and direction. Mukerji (1976) succinctly summarizes the dilemma confronting all educators today when she states:

> The dynamics of the media, and television in particular, are still in a healthy state of flux and development. We are nowhere near approaching a final score where television and children are concerned. That television has a tremendous influence on children is clear. Whether that impact is more positive than negative depends, to some extent, on the determination with which concerned adults help to tilt the balance in favor of children (p. 321).

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SELECTED WAYS TO BUILD INTEREST
IN
SECONDARY READING

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The content-area teacher is constantly faced with the difficult task of building interest in the subject matter so that students want to read. Suggestions for helping students develop this interest are given below.

Generally speaking, there are two broad types of interest-building procedures: long term and short term. These two types are examined for the remainder of this paper with consideration given to specific techniques.

Long Term

Long term ideas require an emphasis over a longer period of time. For example, an assignment to students to read a book in an area of interest and to prepare some type of report, reaction, or project -- oral or written -- within three weeks is a long-term procedure.

Other long-term procedures are continuing activities or situations which require emphasis throughout the school year. Three examples of these are given below:

The teacher should

1. Read widely herself. The reading should include certain of the books that students enjoy, possibly a few of the following: Jay Bennett, The Birthday Murderer; Frank Bonham, Chief and Durango Street; Fred Bodsworth, Last of the Curlews; Robbie Branscum, Three Buckets of Daylight; Alice Childress, A Hero Ain't Nothing But a Sandwich; Robert Cormier, The Chocolate War and After the First Death; William Heuman, Home Run Henri; S. E. Hinton, The Outsiders; Mollie Hunter, The Stronghold; Jim Kjelgaard, Big Red; M. E. Kerr, I'll Love You When You're More Like Me, Dinky Hocker, Shoots Smack, and The Son of Someone Famous; Katy Letcher Lyle, I Will Go Barefoot All Summer for You; Betty Miles, Just the Beginning; John Ney, Ox Under Pressure; William Sleator, Run; Dennis Smith, Report from Engine Co. 82; Paul Zindel, The Pigman.

The teacher who reads widely knows many more books to work with in attempting to build interest.

2. Keep a variety of books available in the classroom. The most successful teachers of reading in the subject-matter courses are those who make available many books to students and provide the time for reading and reaction.
3. Demonstrate to students how important reading is to them. This may be done in part through classroom examination of the state driver's manual(s), how-to-do it books, job applications, income tax forms, beauty treatment descriptions, and other similar publications. Words for vocabulary and comprehension exercises may come from such sources.

Many teachers may feel that the best way to build interest in secondary reading is through using a continuing process, such as that developed by a social studies supervisor in a Virginia school system (Branyon, 1978). The variety of suggestions which she made have been adapted below:

1. Go over the organization of the chapter before beginning to read.
2. Use both oral and silent reading.
3. Be sure that all students understand and can apply some study-learning process, such as SQ3R.
4. Study the words, especially the special vocabulary, in context.
5. Practice finding main ideas.
6. Emphasize differences of fact and opinion.
7. Read and study examples of cause and effect.
8. Practice using reference and research procedures.
9. Use careful review exercises before a test.
10. Sometimes use open-book tests which require use of varied reading skills, reference skills and study skills.

Brayon found that as students developed abilities to deal with the subject matter, they developed an interest in reading more of it.

Short Term

Short-term approaches to interest building usually take the form of brief classroom activities which are intended to interest the class members. These procedures may be in the form of games, limited discussions, experiments, or other variations from the regular classroom activity.

The short-term interest-builders are effective if planned as instructional devices and if intended to broaden a student's knowledge of the subject area. When used as games for the sake of the games, or stories merely to take the time, there is no justification for them. Selection of interest-builders from source books and construction by the teacher should be done with care. The best devices are those prepared by the teacher for specific class situations.

The short-term approaches usually fall into one of the four categories considered below (Thomas, 1979):

1. Organizational. Some class-organization arrangements seem more effective than others for interest building. Nobody knows which is best for a particular class or for the teacher. What is most important is the type(s) of reading experiences after the organization is made. The key to the success of a particular organizational pattern may be whether the procedure has been used frequently in the past. Perhaps, the most successful of the organizational patterns is the small group plan in one of its many varieties. Small group plans which have proved successful for building interest in content-area reading include paired discussions, debates, panels, brainstorming, paired research, skit writing and presentations, and many others. Individual projects can be gateways to work with research.
2. Humor. The old standby for interest building is the joke. For some subject areas factual stories with funny twists work well. Humorous quotes from writers, especially authorities in the subject field, and humorous poetry work well. Not all teachers are good tellers of jokes, but every teacher who works well with interest building has a joke book in the desk drawer.
3. The unusual. Unusual or different procedures and processes are interest builders. Good examples of these are the laboratory sessions in science classes, drama sessions in the English classes, videotapes or other audio-visuals in most subject areas, field trips, visiting experts. Each of these may easily become an instrument for building interest.
4. Curiosity. Curiosity develops more interest than most joke books. When teachers whet the curiosity of students, they don't need to be funny. George Stimpson's book, A Book about American History, is made up of the answers to large numbers of curiosity building questions. For example: How much did it cost to discover America? What battle was lost as a result of a card game? Stimpson answers each question carefully and seriously. Similar books are available in other subject areas.

A teacher who sincerely desires to build interest in subject-matter reading among high school students does so through hard work and creative imagination.

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DEVELOPING A PROFILE OF PROBLEMS IN READING IN YOUR CONTENT AREA

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There are many kinds of profiles: sketches, maps, diagrams, outlines, and so forth. They all have one characteristic in common; namely, they provide the viewer with an overall concept of an object, process, idea, or situation, together with details that can be seen in relationship to one another. A profile of reading problems has those same features and serves the same purpose. The end objective, of course, is to improve reading. We are focusing our attention toward reading achievement (and comprehension) in the content areas. Therefore, I intend to suggest ways you as the classroom teacher may develop such a profile for that very purpose.

Getting Our Bearings

Before we can go somewhere we need to "determine our bearings . . . ," a navigation term meaning to find out where we are right now.

The Chinese have a saying that, "There are five points on the compass: north, south, east, west, and where you are; "the last being the most important to determine before you set your course for moving onward.

Here are some questions that each content area teacher should answer as the beginning point of the profile:

Where are you right now in your content area teaching? How many of you are satisfied with what you are doing? How many are happy with the textbook being used and think it is just great for all students? How many are doing all that can be done to enhance learning, to improve performance, to develop thinking skills, to motivate your young readers, and to affect change? How many of you know the potentials of the students in your classes: their IQs, their reading abilities, their past experiences, their needs and ambitions, their self-concepts and goals? How many of you know your students' feelings toward study, reading, and achievement in your subject area? How many think your students this past year did their best?

Aristotle maintained that an individual is ready to learn only "when brought to the point of conscious ignorance." We might restate that this way: "We will learn best what we have discovered that we need to learn."

Here is an outline that will help you develop a profile of the reading situation in your content subject. If you will fill in this outline, you will have a complete picture of where you are and you will find many hints on where you should be going.

Your Content Area Reading Materials

The Textbook: Does it Match Students Abilities?

Can all your students read the text successfully? If they can, there is something wrong. It is too easy and no challenge for better and superior readers. Do many of your students find it impossible to understand? Is it too hard? Frustrating to many? Is it a joy to read? A bore? A compendium of stark facts that are designed for rote memorization? Is it full of life and zest? Is it written for ninth-graders (or whatever) or is it written like a college text? Is it yours only, or do you have several at varying levels of readability (difficulty)? Why are you using it as the reading medium in your classes?

Take a fresh new look at that textbook. What is it doing for you? For your students? To you students (especially your disabled readers)?

On a scale of 1 to 10, how would you rate your textbook for doing the job it is supposed to do?

Your Weekly News Magazine

If you use a weekly newspaper in your classroom, does it cause reading problems? If so, for which students? If so, what kind of problems? How do you use it? What kind of reading aids does it provide? Why do you use this particular weekly newspaper? Have you used, or do you now use, a segment of the local daily newspaper? What problems are inherent in its use?

On a scale of 1 to 10, how does your weekly news magazine rate?

Ancillary Reading Materials

What other materials are being used (catalogs, manuals, leaflets, directions sheets, units-of-work packets, etc.)? What reading problems do average or disabled readers have with such materials. Be specific. Generalized statements such as "They can't read them" are not useful in developing a good profile.

Rate these on a 1-10 scale.

The Learning Potentials of Your Students

Intelligence and Reading Ability

What should you know about each student's learning abilities? In terms of intelligence, where does the student rank in relationship to all others of his/her age? If the disabled reader is in the top quartile, what does that tell you? If the disabled reader is in the bottom decile (10%), what does that tell you?

In terms of reading abilities, can the student handle main ideas, details, cause-and-effect relationships; implied meanings, references to literary characters, historical events, mythology, or similies and metaphor? Can the individual who is disabled in reading cope with complex sentences, specific technical and special vocabulary, or long paragraphs? If the disabled reader can only read at third-grade level, how does he/she handle reading assignments in the ninth-grade text?

Hopefully, you can obtain a computer printout of the intelligence scores converted into IQs and the reading ability scores. With the help of your school reading specialist, the reading scores (which are meaningless in themselves) must be converted into percentiles.

With that information, here is what you do: Convert the IQs into percentiles using this conversion chart:

CONVERSION TABLE: IQs INTO PERCENTILES

IQ (approximate)	Percentile (approximate)
130+	97th-99th
125	95th
120	90th (Upper 10%)
115	80th
110	75th (Upper quartile)
105	60th
100	50th (Midpoint)
95	40th
90	25th (Lower quartile)
85	20th
80	10th (Lowest 10%)
75	6th
70	3rd

Source: Aukerman, Robert C., Reading in the Secondary School Classroom. New York: McGraw-Hill Book Co., 1972. Used by permission.

Next, divide the list of students into four parts, with students ranking highest in the top quartile (25%), and those ranking lowest in the bottom quartile.

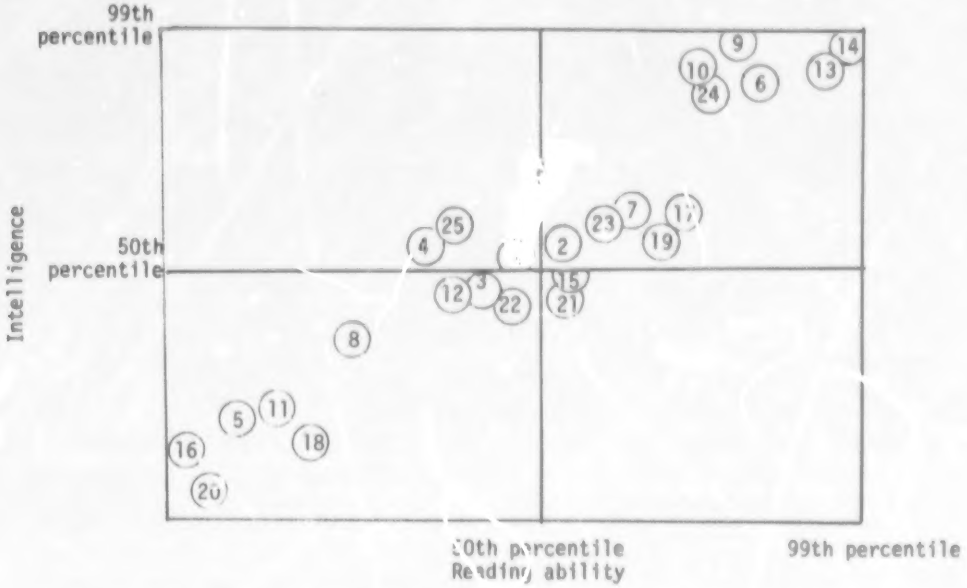
Administer an appropriate reading test and make a list of students in your class, noting their IQ scores and percentiles, and their reading scores and percentile equivalents--the latter are obtained from conversion tables in the test manual. The result is as shown in this table:

DATA SHEET FOR THE NELSON DENNY-READING TEST

Pupil	Sex	Intelligence		Reading	
		IQ	Percentile	Score	Percentile
1	M	99	49	85	50
2	M	101	51	90	55
3	M	99	49	83	45
4	F	101	52	80	40
5	M	89	24	52	10
6	F	118	88	112	85
7	M	105	60	94	62
8	F	95	40	77	35
9	F	128	96	108	80
10	M	120	90	104	74
11	M	90	25	50	8
12	M	97	44	80	40
13	F	124	94	130	97
14	M	131	98	141	99
15	F	99	49	90	55
16	F	86	21	35	2
17	F	102	54	93	61
18	M	88	23	65	20
19	M	102	57	98	65
20	M	81	12	30	1
21	F	96	42	83	45
22	M	98	47	86	49
23	M	103	56	92	60
24	F	118	87	107	79
25	F	100	50	82	44

Source: Aukerman, Robert C. Reading in the Secondary School Classroom. New York: McGraw-Hill Book Co., 1972. Used by permission.

The class profile now can be drawn with these two factors as points of reference. From the chart, we can see that student #1 is just about average (50th percentile) on both reading ability and intelligence. He is placed in the center of the scattergram. Student #2 is also near the center. But student #5, for example is in the lower quartile on both measures. This is how the scattergram shows the profile of this class:

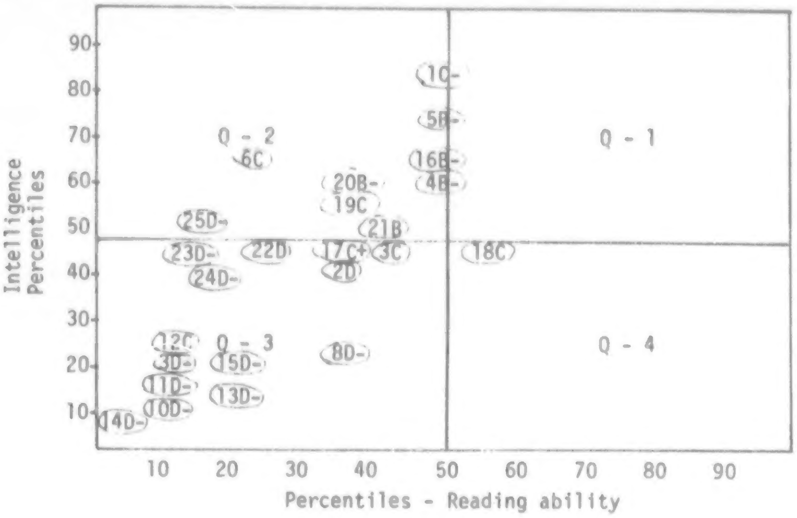


Scattergram showing class profile when percentile data on reading ability and intelligence are plotted.

It should be clear that there are three rather distinct ability groups here.

The profile of another class might be quite different:

Scattergram obtained by plotting percentiles of intelligence and reading for one class.



At this point, the teacher should ask: What reading materials in my subject area must I have on hand to provide success for these varied abilities? Where can they be obtained? How can I organize them for most effective classroom use? How does the textbook fit into the total profile?

We will consider answers to those questions later.

Past Experiences and Background in Subject

Which students have not been exposed to the concepts and vocabulary of the subject even in an elementary manner at any time previous to meeting the subject in your class? Are there any common experiences that you should assume every child has had? Are you certain the disabled readers have had those experiences? Is there a special background of experience beyond common exposure to the facets of our environment that an individual should have to adequately cope with the written materials in the subject?

Self-Concept, Attitude Toward Self and Toward Subject

Does the disabled reader view himself/herself as already an academic failure? Does the disabled reader approach a new textbook with predestined failure? In what areas does the individual excell and experience self-satisfaction? Could those successes be captured and transferred to the subject matter of your class? How does the disabled reader feel in your class?

Your Concept of Your Role as the Content Teacher

Where are you now as a teacher of subject matter? How do you view your role? Do you differentiate between teaching and learning? What is teaching? What is learning? Be specific in your answers, otherwise this profile will have serious gaps in it.

Years ago, it is told, that the Burgermeisters of the ancient German town of Nurnberg became disturbed over the inability of school children to learn, so they purchased an invention that was brought to them by one of the wise men of that day. It was a huge funnel, called a "trichner". It was to be used by the schoolmasters for pouring information into the dumkopfs (dumb-heads). This concept of teaching (and learning) seems to persist even today in some places and, indeed, it is said that the Nurnberg Trichner is still an effective audio-visual is Nurnberg.

What are your attitudes toward slow learners? Are they dumbkopfs? Would you rather not teach them? Do you understand their self-concepts?

When I first began to teach (It was in Hutchins Intermediate School in Detroit.), I was given homogeneously grouped class #13 . . . the lowest possible group in the eighth grade. Lower than that was the educables and the "opportunity room", which was a collection of the "opportunity room", which was a collection of the society-at-risk children (the potential and already-arrived criminals, many of who were nephews and nieces of Detroit's Purple Gang. Lillian Purple was in my group 13 class, however). Speaking of attitude toward self, all I need to say is that those lowest-group-in-the-eight-grade kids were quick to alert me as to their status.

Apparently I was using the Nurnberg Trichner when Sally Cohen arose and proclaimed, "Mister Aukerman, you should know that we are the dumbest class that this school ever had, and also you should know that you can't teach us nuttin'." Applause . . .

Not only did they believe this, but they set about to prove it!

What do you know about the self-concept of your students?

Knowing About Up-to-Date Goals in Your Subject Area

This is the crucial facet of your subject. It requires that you know where your field is going, the directions it is taking, what are leaders in the field recommending, and what is the strategy that is working best with today's youth.

If there were no goalposts at a football or hockey game, there would be no point in the game. What goalposts have you set up for your students?

Where do you find such information? In the reports and yearbooks of the national subject-matter association to which you belong.

Let me give you a very specific example of how goals and objectives may change strategies, materials, expectations, and performance completely.

When I taught social studies in high school, I drilled my students on the principles of economics (our text was a miniature of that used in freshman college econ classes); I had foolproof objective tests in American History by which I could tell at a glance whether or not the students knew the direct and indirect causes of World War I; in geography, the "in-thing" was to be able to recite the chief products of a nation or to show the geographic influences on the historical events of that nation; and in civics, the stunt was to be able to memorize the names of the President's cabinet.

You may well ask, "Who cares?" and you would be right. But with those objectives as the guiding forces of that day, can't you see how instructional materials, textbooks, and method would all be influenced?

Let's consider the texts of that day: I have already alluded to our economics text, The Principles of Economics; Beard and Bagley's History of the American People, Magruder's American Government, which, incidentally, is now in its upteenth edition, even though Magruder and his ilk are long gone (Another proof that, perhaps, the Nurnberg Trichner is still around?)!

Are things different today? You bet they are and if you are a social studies teacher, you had better take a fresh new look. Here is what is happening to goals:

In place of memorizing sterile facts in the social studies, there is

"discovery learning"
problem solving"
"critical thinking"
"inquiry technique"
"investigative study"
"comprehension"

How these goals have completely changed the techniques in the social studies and the types of reading materials that are needed to achieve those goals will be discussed later.

Knowing About Reading Resources in Your Subject Area

As new goals dictate new strategies, different reading materials must be assembled as the resources for achieving success for all students, not just the disabled in reading. Here are some questions to be answered as part of your profile:

What reading materials are there on each major unit of study in my subject area?

How well does the textbook provide?

What reading materials are available for each major topic for students with low (third-grade, for example) reading ability; or for average reading ability; and for superior reading ability?

What does this mean? It means that, if there are six units to be covered in your course, you will need to know about high, low, and medium difficulty materials in each unit; a total of eighteen sets of materials for reading for reading resources.

Three additional questions will, when answered, complete this profile:

What additional information do you need to improve your student's ability to read in your content field?

How might you weave some new ideas that you glean from this conference into your daily lesson plans?

How might you adjust or change your methods and reading materials to assure optimum success of poor readers, average readers, and superior readers in your classes?

By filling in this profile, you will have taken a giant first step toward enhancing learning, improving performance, developing thinking skills, motivating your students, and affecting change in your subject-matter class.

HOW CAN THE CLASSROOM TEACHER MATCH CONTENT AREA READING MATERIALS WITH THE NEEDS AND ABILITIES OF STUDENTS?

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Since reading is the common denominator of learning in most academic areas, we have come to think of the textbook as the sole reading resource. Yet, given the many alternatives we have today, the textbook must be considered as only one of many reading resources. We should, consequently, not rely on it exclusively; neither should we discard it. Let us first, therefore, consider how we may match texbook content to the needs and abilities of learners.

Grouping Via Textbook Difficulty

It is common practice for each classroom to have a whole-class textbook, regardless of whether the students in the class can read that particular book. Assuming this to be the case: one textbook and a heterogeneous group of learners, does it make sense to use that text anyway? Of course not.

Here is a suggestion that works: Xerox a paragraph from the text that has not been read by the students. Devise ten questions (if possible), consisting of three factual recall questions, two true-false questions, three fill-in-the-blanks questions, and two insight questions (cause-and-effect; implied meanings, etc).

Give the paragraph and questions to every student as a "test" of reading ability of that particular textual material. Note the speed of each student and multiply it by the percentage of accuracy in answering the questions. This will give you each student's ability on that particular text.

You then separate the students into groups: those that have ability in the top 25%; those with abilities in the middle 50%; and those in the bottom 25%. Using your best judgment and this gross estimate of their abilities, you can decide, perhaps, that the middle 50% can successfully use the text while those in the upper and lower quartiles must have some textual materials more appropriate to their abilities.

Probably you cannot get different texts for those in the upper and lower groups right away, if ever. What do you do then?

You have three groups, but all three can be brought together for the textbook survey.

Survey Via Textbook

The objective is to provide each student with the means for developing his/her own overview of the particular subject presented in the chapter. In home economics it could be "Energy Conservation"; in geography, it could be "The Great Plains"; in biology, it might be "Genes"; and so on.

Whatever the topic, there are bound to be sub-topics; related subjects; details; main ideas, cause-and-effect relationships, and so forth. These are easily noted through the survey technique, provided the teacher provides special help for the bottom group and extra challenge for the top group.

Here is one way to make the survey effective for all: Each student has his/her textbook; the same for everyone. The teacher conducts a whole-class discussion that has been planned beforehand. In the planning, the teacher has xeroxed all pages of the textual chapter. Inasmuch as textbook pages are usually smaller than standard 8½ X 11 paper, there is plenty of marginal space for inserting notes.

Even though you may all be acquainted with the survey technique, I will run through it here to illustrate the planning that assures success (It doesn't "just happen").

The following elements are to be noted in the planning and in the survey session:

1) Note main title of chapter.
   Make notes on various implications or meanings.
2) Read introduction to class.
   The teacher may do this, or plan for some specific student (good reader) to do this.
3) Review, summarize, and restate the main idea and general concepts of introduction.
   This should all be noted by the teacher in preparation for the group discussion.

The probable answers or ideas that will be suggested by the students in the class will have been anticipated by the teacher.

Each sub-heading will be read by specific students who have been named in the margins of the xerox pages. In this manner, poor readers can read simple, easy heads, and the better readers can read and comment on the complicated or more abstract headings; all preplanned.

Wherever an illustration, chart, map, diagram, picture has been included in the text, specific students should have been selected (and names noted) to read the captions below the illustrations and to suggest their relevance to the main topic. This, too, is preplanned so students at the several levels of ability will be able to succeed when matched with materials at their ability levels.

On the teacher's xerox copy, specialized vocabulary should be noted and plans made to reproduce that vocabulary either on the chalkboard or on strips of tagboard prior to the survey lesson.

Later on, the vocabulary will be learned in the context of the chapter topic and will be used in sentences written by the students. Each sentence should be related to the chapter topic. Here, again, the teacher should anticipate several possible sentences in which the vocabulary words might be used.

Important people mentioned in the chapter (and perhaps illustrated in portraits or in situations) are also noted in the margin by the teacher and their names printed on the chalkboard or on strips of tagboard. Later on, the contributions of those famous people are learned in connection with the topic of the chapter.

A summary (pre-planned) may now be made by the teacher, with the help of class discussion. This will include references to the (pre-planned) oaktag sub-headings, vocabulary, and famous persons. These visuals will all be assembled on the felt-board or chalkboard in the survey-outline. Everyone in the class, regardless of reading ability, has taken part in developing the survey and has been exposed to the main ideas, sub-topics, vocabulary, important persons names, and has, perhaps, contributed an idea or suggestion related to the main topic of the survey.

Having completed this survey of a topic, using the text as the resource, all students can see relationships of cause and effect; details supporting main ideas; factors, such as people and natural resources; and the extent of the topic and its related sub-topics.

At this point, each student has been "readied" for reading about and within the topic. The nature and amount of reading will be largely determined by each student's interest in the topic or in a particular facet of the topic. The type of reading will be limited only by the availability of materials at several levels of difficulty.

The Textbook As a "Sampler"

Any textbook is a sampler of but a small fraction of the accumulated knowledge about a topic. This should be made clear to students.

It is not reasonable, therefore, that students should have the right to sample; to select those facets of a topic that appeal most to them? How does this work?

Each student has a copy of the text. The poorest readers have, with the help of the preview, acquainted themselves with some of the sub-topics. They can find these again in the textbook either by identifying sub-topic headings or through illustrations. They can then make a list of a few topics they prefer to investigate. Those students in the middle group may wish to use only the textbook, as they have proved that they can read it without much problem and it is readily available. They can read those parts that appeal to them. Having sampled the sub-topics in this manner, they may select one or several for in-depth study in materials outside the text. Similarly, the best readers may wish to read in the the text or skim the text as a basis for deciding on special topics to investigate more in depth.

As a "sampler", the textbook provides merely an introduction (a smattering of information) on topics, some of which are of far more interest or relevance to one student than to others. The textbook is like a smorgasbord, providing a broad outlay of sub-topics to be sampled, with the opportunity to partake more on those of most interest.

Multi-Texts

There are several readability formulas that may be used to give a rough estimate of the difficulty of several comparative texts. The Fry formula (1977) is, perhaps, the most popular and is easy to use. If one wishes to be more definitive in making the comparison of texts to determine which is more difficult and which is easiest, these are the additional factors to assess and compare:

length of sentences

number of complex sentences in a given length of textual material

amount of difficult vocabulary (in addition to the technical vocabulary of the topic)

incidence of abstract ideas and concepts.

There are other factors of readability, but those listed above are sufficient to consider when making a text and in selecting several texts for a heterogeneously-grouped class.

In spite of restricted budgets, textbooks do need to be replaced. When that time comes, the teacher or academic department that is attempting to provide content learning for students who have a wide spectrum of reading abilities should make a positive effort to acquire at least two (and, ideally, three) textbooks, the total of which would be but a very small number greater than had but one text been acquired for each potential student.

For your classes, how many at each level would it be wise to acquire? You can answer this only by estimating, on the basis of past years, how many students of high, medium and low reading abilities you have had at any one time. Doubtless, there have been times when the majority of your pupils appeared to be in the lowest reading group. You might, therefore, need 20 copies of the easiest text, 20 of the average, and 10 of the more difficult. If you are in a department where there are other teachers teaching the same subject, it makes ordering more easy, and the totals of texts necessary at each level may be better proportioned by sharing and shifting texts between classes.

With a supply of multi-texts, several things can be done that are not possible with one text. For example, three different surveys can be devised and compared to see which topics seem to be important to all three authors. More able students can sample parts of the easier texts for more relaxed reading of certain topics. Students can compare the depth and breadth of treatment given by one book compared with the others. Similarly, comparisons can be made of the manner in which controversial subjects are treated by each author. Many in-depth conclusions may be reached by such comparisons, using multi-texts as the media.

Classroom Newspapers and Magazines

Fortunately, there are at least two major groups of classroom periodical available at several levels of reading difficulty but, at the secondary level, covering essentially the same content in each particular issue. One group of classroom newspapers has been known for many years as "Current Events", even though the titles of various publications have extended beyond that. The other group of publications is commonly known as "Scholastics".

The "Current Events" Group

Xerox Education Publications of Columbus, Ohio publishes the following news magazine for secondary students, bi-weekly during the academic year:

Current Events will be commencing its 79th year of publications next September. It is designed for junior high school students with "average" reading ability. It is primarily a social studies periodical, with contents of every issue categorized under USA, World, U.S. History, a news cartoon, US news, and world news and frequently a map pictorializing some current issue. In addition to this major thrust, it contains very brief feature departments dealing with sports, TV, careers, and a psychological observation by Dr. Steve Bank.

Current Science is a news magazine that starts its 65th year in September. It surveys the latest in science news from all over the globe and, to make it more interesting, includes science experiments, puzzles, jokes, and cartoons. This mix is aimed at junior high students.

For students with low reading ability, Xerox Education Publications provides two weekly periodicals: Know Your World Extra (written at the 2nd and 3rd grade reading level) and You and Your World (3rd to 5th grade reading level). The contents of these two publications usually include current news features, cars, stars, sports, finance, and an occasional short story.

Read Magazine is published twice a month for English classes. It contains articles, stories, poems, and plays at the junior high level and is written "at level" for "average" readers.

Scholastic's classroom publications cover a wider range than the Weekly Reader (Xerox Education Publications) offerings described above. There are three Scholastic news magazines (published bi-weekly) in the field of the social studies:

Junior Scholastic covers current events, world cultures, and U.S. history at the junior high level of readability and interest.

Senior Scholastic does a similar job for senior high students, with special emphasis on their roles as citizens and consumers.

Scholastic Search is written as a high interest-low readability publication specially designed for American History classes, but contains interesting features on television, word puzzles, sports, movie reviews, and rock music.

For English classes, Scholastic Scope, a weekly, provides reading materials at 4th to 6th grade level for senior high students, whereas Literary Cavalcade provides contemporary plays, stories, and poems monthly for better readers.

Art and Man is Scholastic's news magazine for senior high school students. It is written "at level" and is published monthly (six issues) during the school year.

Scholastic Science World is somewhat similar to Xerox's Current Science. It is published bi-weekly for "average readers in the senior high grades."

Co-ed had been published monthly for many years as a high interest periodical in the home economics field. It features personal development, grooming, health, family relationships, careers, nutrition, and family living.

Scholastic Wheels, (published quarterly) keeps students up to date on safe and efficient driver techniques, auto maintenance, car fads and facts, and so forth. It is for high interest-average reading ability students in the senior high school.

Inasmuch as these Xerox publications and Scholastic magazines are written specially for junior and senior high students, it is a relatively simple task to match these reading materials to the interests and reading abilities of students. In the event that you are in a field where there is no news magazine designed specifically for it, it is still possible to develop some cut-and-paste magazines of your own from articles in other magazines. This takes considerable effort and time, but it has been done successfully. Here is what one must do:

1) Collect articles from many sources, but only those that have high interest and average or low readability.

2) If the articles run on pages back to back, the back-sides of the page will have to be xeroxed.

3) Assemble the printed materials neatly on the page. This may require a cut-and-paste job to plan a balanced layout and an extra-wide margin for binding.

4) After each article has been assembled, have the pages xeroxed back-to-back in real magazine form and bind the xeroxed pages into "term paper" binders. The number of articles in each binder will depend upon the way you intend to use the subject. The use of term paper binders makes it possible to add new aritcles as you discover them. It also makes it possible to discard obsolete articles and replace them with newer items.

Classroom Clipping File

When it does not seem feasible to devise a news-magazine on particular subjects, it may be more useful to develop clipping files.

Although the name may imply that the teacher has a series of manila folders with an assortment of clippings thrown into each, this is not a very efficient way to handle clippings. It is much better if they are assembled onto 8½ x 11 papers and xeroxed for filing.

The topics in the clipping file can be sequenced and cross-referenced to correspond to similar topics in the textbook. In many instances, a remarkable file can be assembled in the space of three or four years.

Because the articles or items are written with some human interest feature, they provide students with more relevant viewpoints than the more staid and structured presentation of facts found in many textbooks.

One advantage of clipping file articles is that comprehension questions may be xeroxed onto the back and each student can take an individualized test. Special vocabulary may also be noted and vocabulary exercises may be indicated on separate sheets.

The classroom clipping file is a resource that needs to be more positively considered and more actively pursued by classroom teachers who wish to match reading materials with the interests and abilities of students.

Anthologies

We usually think on anthologies as collections of literary excerpts in English classes. There can be anthologies of articles in any subject-matter field. A few examples should suffice to illustrate anthologies in such fields as social studies, science, sports, music, arts, home economics, careers, and so on.

Readers Digest Social Science Readers

These booklets (Reader's Digest size and format) of about 125 pages each, provide anthologies (collections) of articles, newspaper excerpts, poems, short stories, plays, and cartoons, structured under four categories: family, community, nation, and world. A glossary is provided in each reader. Each reader presents an anthology of materials written or rewritten at a particular reading level, commencing with grade 2 reading level through reading level 6. The interest levels range from junior high through senior high.

Readers Digest Science Readers

These anthologies of reading materials ranging from third grade reading level through sixth grade reading levels, with interest levels from junior high school upwards.

Read Magazine

Read was already noted when we discussed Xerox Education Publications. It can be considered an anthology (published bi-weekly) for junior high English classes.

Content Skills Series

Jamestown Publishers of Providence, Rhode Island, markets five booklets that may be considered anthologies in English, social studies, mathematics, science, and practical arts. Each booklet (approximately 100 pages in length) contains 25 original articles of explanatory discourse, followed by comprehension tests of vocabulary, literal facts, interpretation, and application. These content area readers are available for secondary school use at two levels of readability, "middle" and "advanced".

Reading Anthology (Scholastic Scope)

The scope English Program includes three levels (grades 7 through 9) of materials collected into Reading Anthologies. The works at each level are grouped according to theme or author. Each anthology is approximately 320 pages of fiction, non-fiction, poems, and plays rewritten to 4th to 6th grade reading levels. After each grouping (actually similar to a unit), there are questions and activities dealing with comprehension, vocabulary building, understanding literary forms, and so on.

Contact

The anthologies marketed under the name, *Contact*, by Scholastic are designed for senior high students with less-than-average reading abilities. The several anthologies are briefly noted:

Humor: Making People Laugh explores what is funny through dialogs, jokes, limericks, short stories, and non-fiction by famous comedy writers and comedians.

Movies: The Magic of Films is an anthology of excerpts from seven films, together with articles on how movies are made, dialogs, and how ratings are developed.

TV: Behind the Tube contains fiction, plays, cartoons, comic strips, and articles on TV and its influence on people. This anthology is excellent for a class in communications.

Values: What's Important to You? explores this basic theme through short stories, biography (by superstar, Walt Frazier), articles, and plays.

Getting Together: Problems You Face is a collection of articles, plays, letters, and stories excerpted from Scholastic Scope Magazine's teenage advice column. This anthology is appropriate for use in home economics personal development classes.

Contact Series III: Society. There are ten anthologies in this series, all designed for the senior high school social studies. The titles should be sufficient to convey to the reader the nature of their content:

Loyalties: Whose Side Are You On?

Maturity: Growing Up Strong

Crime and Society: The Challenge We Face

Sports: A Mirror of Our Society?

Drugs: Insights and Illusions

Environment: Earth in Crisis

The Future: Can We Shape It?

Law: You, The Police, and Justice

Prejudice: The Invisible Wall

This Land is Our Land: The American Dream

All of the anthologies in the Contact series may be purchased separately or in packaged units which include logbooks (workbooks), poster sets, sound filmstrips, and teachers guides.

How are Anthologies Used?

It should be obvious that collections of related and relevant materials can add immeasurably to students' interest in subject reading. Unlike textbooks, anthologies draw upon the real life experiences of people, many of whom are known as "stars" by youth. Moreover, the variety of materials presented through anthologies such as those mentioned above provides students with a magazine format rather than a textbook format. Anthologies customarily much shorter than textbooks and the selections are written to entertain as well as to inform. The articles in anthologies can convey contrasting viewpoints on relevant controversial problems in a realistic and up-to-date manner, whereas a textbook must remain more neutral, stating only the facts. Anthologies therefore, serve as resources for discussion of problems and for problem solving.

Ancillary Books

Every subject-matter field has numerous books that used to be "assigned" as "outside reading". Today, many such extra sources of content reading materials are known as:

Hi-Lo Books

These are books of high interest, but written at low levels of readability. Most Hi-Lo books carry both interest and reading level designations. Many are published in series. Time and space do not permit description or even mention of the many excellent Hi-Lo books available today. Just a few should serve to illustrate the nature of this valuable resource for content area reading:

Pacemaker True Adventures (Fearon-Pitman). Exciting adventure stories of important historical figures. 11 books.

Action Library (Scholastic). 40 paperbacks. Excellent stories of adventure, sports, romance, mystery in a variety of economic and cultural settings.

American West Series (Fearon-Pitman). Three anthologies of biographical vignettes of characters in the westward movement in American History.

Firebird Collection (Scholastic). Ten books in American History showing the contribution of minorities.

Turning Point (McCormick-Mathers). This is a series of ten books especially good for junior high girls in home economics and English.

Young Adventurers Series (Bowmar). Exciting and contemporary teen-age experiences are described in these six books.

Dodd, Mead & Co's Hi-Lo Books. They publish three categories: sports biographies, the supernatural, and mystery and suspense. The latter are written by Dan Cohen whose latest MISSING! Stories of Strange Disappearances, are all true cases. One of the books, Modern Superstars, provides biographical sketches of six top women superstars in sports.

Crestwood House is a new publishing effort that is providing an unusually fine and diverse array of hi-lo series books. The Spotlight Series is notable with biographies of celebrities in Nashville Music, TV, Soul, Comedy, and the Beatles. Other series of special interest to high school students are: Sports Champions, Racing, Winner's Circle, Focus on Women, Monsters, and about ten others.

Children's Press has achieved a notable spot in producing fine books at low readability. One of their newest series is directed toward junior high school students who have but 1st or 2nd grade reading ability, with paperback titles, Skateboard Mania) Soap Box Racing, etc. Each book is designed like a preprimer or primer with no more than two or three simple sentences per page.

Sports Star Series is a new entry by Harcourt Brace, and Jovanovich and features Nadia Comaneci, Chris Evert, Walt Frazier, Pele, and ten other superstars. The books are published in library bindings and paperback.

EMC Corporation has published a new collection of books that provide biographies of outstanding achievers of our time whose success should inspire junior and senior high students. Among the titles are Henry Winkler, Gabriel Kaplan, Tracy Austin, Janet Guthrie, Rod Carew, Andrew Young, and eight or ten others. The series is called Headliners. This publisher also offers us two series in the perfoming arts: Center Stage and Behind the Bright Lights. The contemporary biographies are written at 4th and 5th grade level of difficulty. Hispanic Heros of the USA consists of four books of biographies of twelve achieving, succeeding Americans of Hispanic heritage. A similar series is titled Black American Athletes. These series are written at 4th grade readability. Another series of four books provides biographies of sixteen Women Who Win, written at a fifth grade reading level.

Steck-Vaughn Company has recently introduced 8½ x 11 paperbacks, each containing a collection of 15 biographies of Superstars of Rock, Superstars of Movies and [illegible], Superstars of Country Music, and Superstars of Soul. The books were written at 5th to 6th grade levels for junior high students and senior high students with low reading ability.

Reference Books

No content area reading program would be complete without a collection of reference books. This is especially important for the better students who want to explore subjects more deeply and to follow related subjects. Encyclopedias and information manuals give the best promise in this field.

Encyclopedias

The headings and sub-headings in encyclopedia articles serve as guides for organizing information and as keys to cross referencing and further investigation. In many instances these are set in bold-face type. Let us suppose that a student in science has commenced a search for information on insects. At the end of a lengthy article on insects, the encyclopedia also will contain a notation something like this:

See also: ant
aphid
bedbug
bug
bumblebee
butterfly
cockroach
caterpillar
etc.,

Articles in the encyclopedia will also help the the serious reader develop a logical outline of the components of the subject being studies, for example:

A. Insects
varieties

B. Importance of Insects
beneficial or harmful
chemical control

C. Bodily structure

D. Senses

E. Life Cycle
reproduction

F. Ways of Insects
social structure

G. Orders of Insects

The newer encyclopedias that are designed for junior and senior high students are magnificent publications, printed in full color, costing millions of dollars to produce. Their use in the content area classroom will add a significant dimension to the academic achievement of average and above average readers.

Books of Facts

Like encyclopedias, books of facts contain enormous amounts of information, but arranged in less exciting format. Nevertheless, books of facts appeal to a certain segment of students who want to accumulate information essentially for "information's sake". For them, reading and memorizing are synonymous. Their interests and needs can be matched with such publications as the World Book of Facts, The Guinness Book of World Records, Sports Illustrated, etc.

Teen Magazines

Teenagers have an insatiable hunger for facts about their heroes and heroines. That need is matched with an incredible collection of teen magazines that are published with titles such as:

Tiger Beat, Teen, Teen Spectacular, Teen Fever, Teen Bag, Teen Beat, Teen Life, Super Teen, Cream, Rock, Rock Love, Kiss, and doubtless scores of others.

Conclusions

There are several needs and abilities found among any group of children or youth in a classroom, and reading materials must be tailored to those needs and abilities. Specifically, the concept levels of the reading materials are to be related to intellectual ability. Students with low intellectual ability deal most easily with concrete concepts, whereas those with high I.Qs can handle more sophisticated and more abstract ideas. This is a point of beginning.

A second consideration is student interests. In selecting reading materials in any content area, we must ask ourselves, "Which specific aspects of my content area do students already have some interest?"

For example, in science, what are ninth-graders most interested in? In home economics, for example, young people are interested in the radioactive fallout that is a potential in the use of microwave ovens. This is a starting point in the discussion of consumer protection, product safety, and government standards for protection. Isn't this a much more productive way to commence than by expecting students to read about government regulatory agencies. The psychological principle of learning is that learning proceeds from the known to the unknown.

In every content area, young people today are knowledgeable about some things and, indeed, are genuinely interested in debates over controversial issues. These are the springboards for reading to find out answers to questions, to clarify misconceptions, and to support points of view.

The third factor that is an essential part of the selection process is the reading abilities of the students. It is far better to provide easier reading materials so students may enjoy their search for facts and information than to expect them to read materials that are at the frustration level of difficulty.

Unfortunately, many content area reading materials are not graded according to readability (difficulty). Judgments must be made by teachers as students are observed reading the materials.

Finally, if we believe what we preach about providing for individual differences, we will provide in our content area classrooms a wide variety of reading materials that are written within a wide range of reading difficulty, thus matching them to the needs and abilities of the students.

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MAINSTREAMING LEARNING DISABLED STUDENTS: IMPLICATIONS AND TECHNIQUES FOR ENHANCING READING AND UNDERSTANDING IN CONTENT CLASSES

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Although students with reading problems have always been "mainstreamed" into content area classes, current legislation mandates that learning disabled students be placed into their least restrictive environment. Therefore, a higher percentage of students with reading problems are within content classes and require adapted instruction to meet their learning needs. It is assumed that these students have learned the basic reading skills of decoding and comprehension and are "ready" to be mainstreamed. While these students should not be non-readers, they may be several years below their chronological grade placement.

Characteristics

Learning disabled students with mild to moderate reading problems are those students who often demonstrate sporadic performance, performing high in some academic areas and very low in others. These students have average or above intelligence, but there is a significant discrepancy between expected and actual achievement (Hammill and Bartel, 1978). Learning disabled students may be highly distractable and disorganized when completing tasks (Kirk, 1972).

Perceptual, conceptual and language difficulties have also been determined to be more prevalent among these students. Reading progress may be inhibited by their inability to visually or auditorally remember information, limited ability to follow directions, letter or word reversals, and poor sound blending. Harris and Sipay (1975) found that secondary disabled students manifest difficulties in oral and silent reading as observed through word substitutions, weak comprehension, lack of expression, slow rate, and misinterpretation of punctuation.

Learning disabled students may have limited receptive and expressive language development. If so, they lack understanding of concepts, they are unable to produce a variety of responses, they have problems with abstract terms and they are limited in recognizing a whole or breaking a whole into its parts. They often have difficulty understanding oral directions or written materials because of their inability to generalize, categorize, hypothesize, and evaluate the contents (Gearheart and Weishahn, 1976).

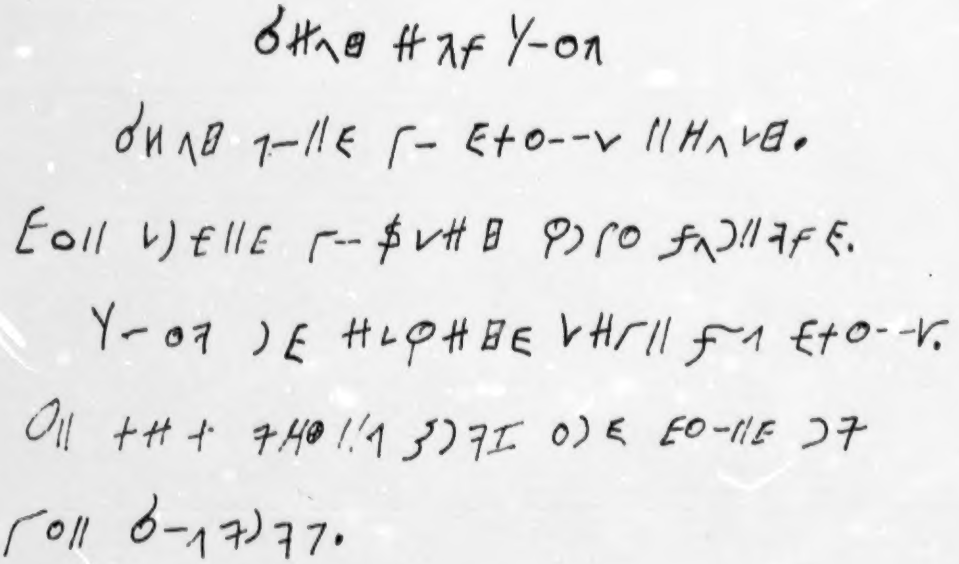
Definition of Reading

Besides identifying the problems of learning disabled students, the content and reading teachers need to decide which strategies and skills are important for the students to learn to be able to read and understand the selected materials. As you read the next two paragraphs, decide which strategies and skills you are using. If these words look like hieroglyphics to you, you might wonder whether learning disabled students are responding in a similar manner when they are asked to read within a content area. The title of this passage is "Mary and John". Knowing these three words in the title, you have some graphic-phonic cues to utilize when decoding the paragraphs. (The translation of the passage appears at the end of this paper.)

An analysis of the process which you used to decode the message has probably led you to conclude that you were using a variety of language and reading strategies and skills. These include the cues of syntax, semantics, grammatical, relationships, morphology, symbol recognition, discrimination and memory, sound-symbol relationships, sound blending and left-right analysis. As a reader you were required to make predictions and confirm these in order to comprehend each sentence and the overall set of paragraphs. Your predictions depended upon your knowledge of basic reading skills, vocabulary meanings, language skills, and a prior knowledge and experience with the key words within the passage.

This exercise serves as an illustration of a psycholinguistic definition of reading: a process of reconstructing meaning from language represented by graphic symbols. Reading is the interaction of the content to be read and the knowledge and experiences of the reader. (Bond, Tinker, and Wasson, 1979; Gephart, 1970.) The current schema theory of reading, which has direct implications for content teachers, gives support to instruction which capitalizes on students' experiences and language to facilitate interpretation of the author's message.

Mary and John



Instructional Strategies

After diagnosing those learning problems which are impeding the reading process, it is the responsibility of the secondary reading and content teachers to adapt the instruction so learning disabled students continue to develop reading skills and apply these to various content materials. Learning disabled students who are mainstreamed will continue to require the services of the remedial reading teacher (Ekwall, 1976; Balow, 1965), but the reading teacher and content area teachers can work toward the common goal of helping learning disabled students read and understand content materials.

While the content area teachers may not feel prepared to teach some of the more "technical" reading skills (i.e., phonics, structural analysis), they can encourage students to use language, experience and comprehension strategies. Current research indicates that poor readers may have syntactic and semantic background but do not use these skills. Instead they over-rely on graphophonic cues and are not flexible in going to language cues when the graphophonic cues do not work (Bergen, 1978; Pearson, 1976). Poor readers over-attend to individual letters or words rather than phrases or sentences and may have low comprehension because the reading is not related to their language and experiences. Harris and Sipay (1975), however, report that poor readers can learn to (1) depend on context cues, (2) use guessing to obtain meaning, (3) benefit in comprehension from a slower reading rate, and (4) reread passages to obtain meaning and fluency. These four skill areas seem practical and workable for the content teacher to develop with those learning disabled students who require assistance to read curricula materials. The following teaching strategies are offered for the reading teacher and content teacher to develop (1) contextual reading, fluency and comprehension, (2) vocabulary and word recognition, and (3) reading flexibility and study skills.

Contextual Reading, Fluency and Comprehension

Various procedures and materials can be used to develop skills in contextual reading, fluency and comprehension. Learning disabled students often are unable to read contexts unless they are assisted. The steps of the Directed Reading Activity, D.R.A., (Kennedy, 1971) present one method of guiding students through content reading. This procedure is the traditional method presented in manuals for basal readers and, therefore, may be overlooked because teachers often feel that it is "boring". Yet, if this procedure is used correctly, it can motivate student interest while providing an integration of most of the factors related to the reading process. This procedure can help the content teacher facilitate students' use of the language and meaning cues which were described above. Stauffer (1975) varied the procedure of the D.R.A. in his Directed Thinking Reading Activity (D.T.R.A.) to place stress on thinking strategies. The D.R.A. and D.T.R.A. activities are appropriate for secondary students who can read contexts of any length. The following presents the suggested steps of the D.R.A. and corresponding teaching suggestions. Any of these suggestions can be used with content reading even if the teacher is not using the D.R.A. or D.T.R.A. activities.

Motivation:	Reading what is meaningful and interesting is important if the student is to understand the content. The teacher provides experiences which bridge the gap between the student's background and interests and the content of the reading selection.
Vocabulary Development:	It is important to choose only those few concepts which are necessary for comprehension. For example, a teacher who introduced the words: animals, mane, photography, Africa, customs, hunting, habitat, and lifestyles, found that she introduced too much new information and did not adequately develop understanding of any of these. Teaching the relevant attributes of concepts facilitates comprehension (Risko and Degler, 1979; Sullivan, 1978).
Decoding Skills:	Key or "new" vocabulary words should be presented in sentences to encourage students to use syntactical, semantic, morphological, grammatical and decoding cues to predict and confirm word meaning and pronunciation. (Van Etten, 1978; Vogel, 1977; Vogel, 1975). Students should learn to use key words as signals to convey meanings of words (i.e., look for a verb to correspond with a noun) (Berger, 1978).

The following is an example of the steps which can be used to combine the above decoding strategies.

The teacher presents the following:

The oneirocritic told me that my dream meant a surprise.

Decoding skills which are being utilized:

(At first student reads, predicts meaning of the underlined "new" word, predicts a person (noun), reads to make sense, and confirms the meaning.)

o
nei
ro
crit'
ic

(now the student uses structural, phonic and blending skills to pronounce the word. The pronunciation can be confirmed with the aid of a dictionary.)

oneirocritic

The oneirocritic told me that my dream meant a surprise.

(Then the student can reread the sentence and comprehend the meaning of the word and the sentence.)

State the purpose:	Stauffer (1975) suggests that the teacher should guide discussion of new concepts and background information so that pupils predict and state a reason for reading. If the students are unable to set the purpose, the teacher can help students focus on the content by using "advance organizers" (Hittleman, 1978), which are a few questions or leading statements.
Reading:	Students can orally or silently read the selection. For the student who is reluctant to read, the teacher can alternate with the student by taking turns reading sentences or paragraphs. Bliss (1977) found that older students' performance increased when they read along with tapes of content materials. Other suggestions are discussed in the next section on reading fluency.
Comprehension:	Comprehension taxonomies (Barrett, 1967) are often used as a guide for levels of questions which teachers can ask during and after student reading. Other authorities who prefer to define comprehension as multidimensional and without a sharp delineation of skills (Hittleman, 1978) direct teachers to ask students to retell the story content and analyze retellings. (Athey, 1978; Kintsch, 1974; Goodman and Burke, 1972). Hansen (1976) found that learning disabled students recall main ideas but have difficulty remembering supporting details. She taught students to rehearse for retelling by looking for information such as imagery, main ideas, supporting details.
Extension or enrichment:	Activities can be provided to practice (i.e., context cues) and extend (i.e., application of concepts) the knowledge, attitudes, or skills developed in the prior steps.

Procedures within the D.R.A. steps provide application and integration of the three language systems (graphophonics, syntax and semantics) to content reading and illustrate the interaction of the printed message with the readers' previous knowledge. (Goodman, Burke and Sherman, in press; Athey, 1978). The cloze passage can also be used as an aid in developing content reading. The cloze passage provides practice of context, semantics, and syntax cues as well as specific practice of the vocabulary and concepts selected from the content field (Jongsma, 1971). Any content can be presented such as selections from songs, poems, literature, sonnets, science or social studies. The cloze can be altered to develop numerous skills, i.e., creative writing can be practiced by asking students to change the mood of the author or develop alternate endings (Bell, 1977).

Various contextual materials can be used for content reading. Some teachers choose single texts while others provide several texts which have similar content. King (1979) reported that she used a single common social studies text but varied the assignments for her three groups of students. Using the D.R.A. procedure, she introduced the vocabulary and concepts to the total class. She differentiated the reading and comprehension tasks by assigning different sets of questions to each group, requiring the advanced readers to locate additional information in other resources, and guiding the reading of the slow readers. When the total group reconvened, the poor readers shared their answers first and the other students supplemented and expanded the discussion with their information.

She found that all students participated rather than just the "top" few students and that the students listened to each other and asked questions as they all had information to contribute.

Page (1973) questioned the use of single textbooks and recommended that content teachers determine reading levels of students and readability levels of texts and make a precise match between the two. As an alternative to single text instruction, content teachers often choose textbooks at varying levels and have students read about the same topic, answer specific comprehension questions, and report the information to the total group. The teacher and/or students can integrate the information by recording or outlining the content which is presented. Some content teachers record textbooks on tapes and encourage slow readers to listen to the tapes as they read the content (Bliss 1977). Also, teachers rewrite units to accommodate the varying levels of the students.

King (1979) described the use of "satellite projects" to teach social studies content through a variety of sources. At the beginning of the year she presented several topics and directed the students to choose those which they wanted to study. To facilitate the students' decision making, she utilized various resources (i.e., audio-visual aids, community people, radio and T.V.) to provide information about the topics. When the decisions were made, a group of reporters were selected for each topic. The total class brainstormed questions which they wanted answered for each topic. The reporters became the "eyes for the class". They collected information by reading various texts and journals, went on field trips with cameras and tape recorders to interview key people, and observed events in progress. Oral and written reports were then shared with the other class members. King found that these students developed precise and indepth interviewing and reporting skills. Much content was elicited and organized for the reports.

Fluency

These approaches to stimulate oral reading fluency have proved effective to aid the disabled readers who read word-by-word or lack contextual reading skills. Hoskisson (1979, 1977, 1975) found significant gains in contextual reading when students received "assisted" or "immersed" reading. This procedure follows three stages: (1) teacher reads a phrase or sentence followed by the student reading; (2) teacher reads omitting words she thinks student can repeat because of practice, and (3) student reads alone with teacher assistance when necessary. The imitative method requires the students to read books as they listen to a tapy until they can read the story without aid of the tape (Chomsky, 1976; Huey, 1908/1968). The neurological impress method proceeds with the student and teacher reading the material aloud for several trials, until the teacher's reading is "faded out" and the pupil is reading independently (Heckelman, 1969). The repeated readings procedure requires student rereading of short passages (50-200 words) until satisfactory fluency is recorded (Samuels, 1979, Dahl & Samuels, 1975, and Dahl, 1975).

Comprehension

In addition to those discussed previously, research has indicated that effectiveness of these comprehension strategies. Guszak (1967) found that teachers primarily rely upon questions that require simple recall of literal details and often limit students' critical thinking and interpretation by implying that all questions have "single", right answers (Caskey, 1969, pp. 649-654). Hansen and Lovitt (1976) reported that recall questions were more easily answered (probably the result of teacher procedures) but found that performance on recall, sequencing and interpretation questions improved with direct instruction on these skills during oral and silent reading. An effective strategy within their study was to require students to correct their answers to comprehension questions. Teacher feedback, including showing students how to correct mistakes, and reinforcement for corrected answers proved helpful in changing comperhension performance on tasks which require "correct" answers (Jenkins, Barksdale and Clinton, 1970; Carroll and Chall, 1975; Proe and Wade, 1973; Klann, 1972). Research supports the use of the Request Procedure (Manzo, 1969) in which students are encouraged to ask the teacher questions about each sentence that is read prior to teacher questioning.

Oral reading procedures described by Lovitt and Hansen (1976) which required students to reread, rehearse and reword answers showed an increase in both oral fluency and comprehension. Riley (1979) presented a process for teachers to help students generalize what they read and extend responses to questions by providing cues and requests for elaboration of responses.

Sullivan (1978) suggests that secondary students need to learn the comprehension strategies of: (1) paraphrasing passages, (2) selecting meaningful word clusters, (3) searching for supportive details, and (4) making deductions. Some research indicates that instructing students to visualize pictures of the content has helped poor readers comprehend the material (Levin, Devine-Hawkins, Karst and Guttman, 1974; Levin, 1973).

A major procedure to facilitate comprehension is orienting students to the structure and organizational pattern of paragraphs (Guthrie, 1979; Johnson and Myklebust, 1967). Students can be taught to locate main ideas within paragraphs and then identify the supporting details (Gilbert, 1956). Dechant (1973), Paulsen and Larmer (1966) and Niles (1965) present four organizational patterns of written discourse. They are (1) enumerative order (i.e., listing facts that are of similar importance in the study of mammals), (2) time order (i.e., chronological order of history), (3) following a sequence (i.e., presenting a sequence of steps in a home economics class), and (4) structural connectives (i.e., word order, punctuation, word shifts and structural cues found within a selected reading of literature).

Word Recognition Strategies

A debate exists among reading authorities concerning whether words should be practiced in context or in isolation or in a combination of both. Various formats are used to provide students with practice in reading words in context, i.e., reading multiple new contexts which contain the same words, rereading the same text until accuracy improves, using language experience stories which contain the "review" words (Fleisher and Jenkins, 1978). Word games, word lists, and visual memory exercises provide practice of words in isolation.

Several authors report that the practice of words in isolation (decontextualized practice) facilitates fluent contextual reading (Shankweiler and Liberman, 1977; Perfetti and Hogoham, 1975; Otto, McMenemy, Smith, 1973; Samuels, 1970; Hartley, 1970; Dolch, 1942). Samuels',(1970) research indicated that decontextualized instruction requires students to attend more closely to the graphic features of the words since they can't rely on semantic and syntactic cues. Fleisher and Jenkins (1978) found that practicing words in isolation and in context contributed to growth on isolated word tests but did not contribute to fluency in contextual reading. In their study, Jenkins and Larsen (1973) did find improved recognition of words in context when students were "drilled" on these specific words out of context.

Psycholinguists argue that reading instruction should always provide students with opportunities to develop strategies to decode the author's message. Contextual reading fluency is developed by presenting words in context and requiring readers to search for the meaning by using a combination of decoding cues, semantics, syntax, and grapho-phonics (Pearson, 1976).

Both procedures have a place in content reading instruction. Some students who are severely disabled or unmotivated will never become fluent readers, yet need to learn key vocabulary related to the content areas. It is important for them to learn to develop word recognition skills to be able to read these words and use them in content related activities, i.e., reading maps, signs, recipes, directions.

Numerous procedures and activities are suggested to develop word recognition. Students can be provided with oral models (Henrickson, Roberts, and Shores, 1978) or concrete and picture cues (Wulz and Hollis, 1979). Word banks or individual notebooks can help students record and review vocabulary words which are learned within the content areas. Cloze passages can provide practice of these words in different contexts. Asking students to define, illustrate and categorize words in games or vocabulary exercises will further facilitate recognition of selected vocabulary (Vaughan, Crawley and Mountain, 1979).

Reading Flexibility and Study Skills

In addition to using contextual and comprehension strategies, word recognition cues and vocabulary meanings, students need to learn to vary their reading rate when studying content materials. Many learning disabled students who are inflexible in their reading rate need to decide their purpose for reading and then learn to adjust their rate accordingly. Students can be taught to skim (determine the general impression), scan (look for specific kinds of information) or intensively read the content materials (master the content).

Several studying procedures can be used by learning disabled students. The SQ3R method guides students through the content by requiring them to skim the material(s), predict or identify questions from headings (Q), read the text (R), review to answer questions and identify information (R), and recite or explain what was learned (R) (Tinker and McCullough, 1975). Also, students should be taught to acquire and organize new information by using locational skills (i.e., use of dictionary or reference materials), notetaking and outlining.

The above suggestions provide numerous methods and procedures which can be incorporated into content reading instruction to facilitate reading for the learning disabled students. It is hoped that the content and reading teachers can selectively choose those which are most appropriate for the students and the goals of the curriculum.

Mary and John

Mary goes to school early.
She likes to play with friends.
John is always late for school.
He can never find his shoes in
the morning.

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ADMINISTERING A SECONDARY READING PROGRAM

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"Every teacher is a teacher of reading." That slogan may now sound like a tattered phrase. It represents the gospel preached most often by reading people to the multitude of content teachers in the fervent hope of making converts. Any content teacher who does not see the light may be guilty of professional sacrilege.

I cannot help but feel that more would see the light, and thus become converts, if that light were held a little higher by those charged with the responsibility of curricular leadership at the secondary level. If indeed every teacher is/or should be a teacher of reading, perhaps it could be logically extrapolated that every principal is a principal of reading and every superintendent is a superintendent of curriculum. These extrapolations sound plausible on the surface level. A sad fact is that they are virtually not true.

Often central office personnel and building leaders become pre-occupied with administration and neglect supervision. The distinction is that an administrator is concerned chiefly with the day-to-day operations of the physical plant, hot luncheon reports, attendance reports, and other quasi-administrative functions take precedence over curriculum. Goodlad (1979) made the point that principals must be more responsible for the instructional program:

> For principals there is a certain stultifying protection in the ambiguity of the role. Being caught up in the demands of the district office and the routines of management, most of which could be done better and less expensively by someone else, the principal has no time for the development of programs and people within the school. The ambiguity conspires with status elements of the job to cause principals to play their cards close to their chests, making their lonely jobs even lonelier (p. 347).

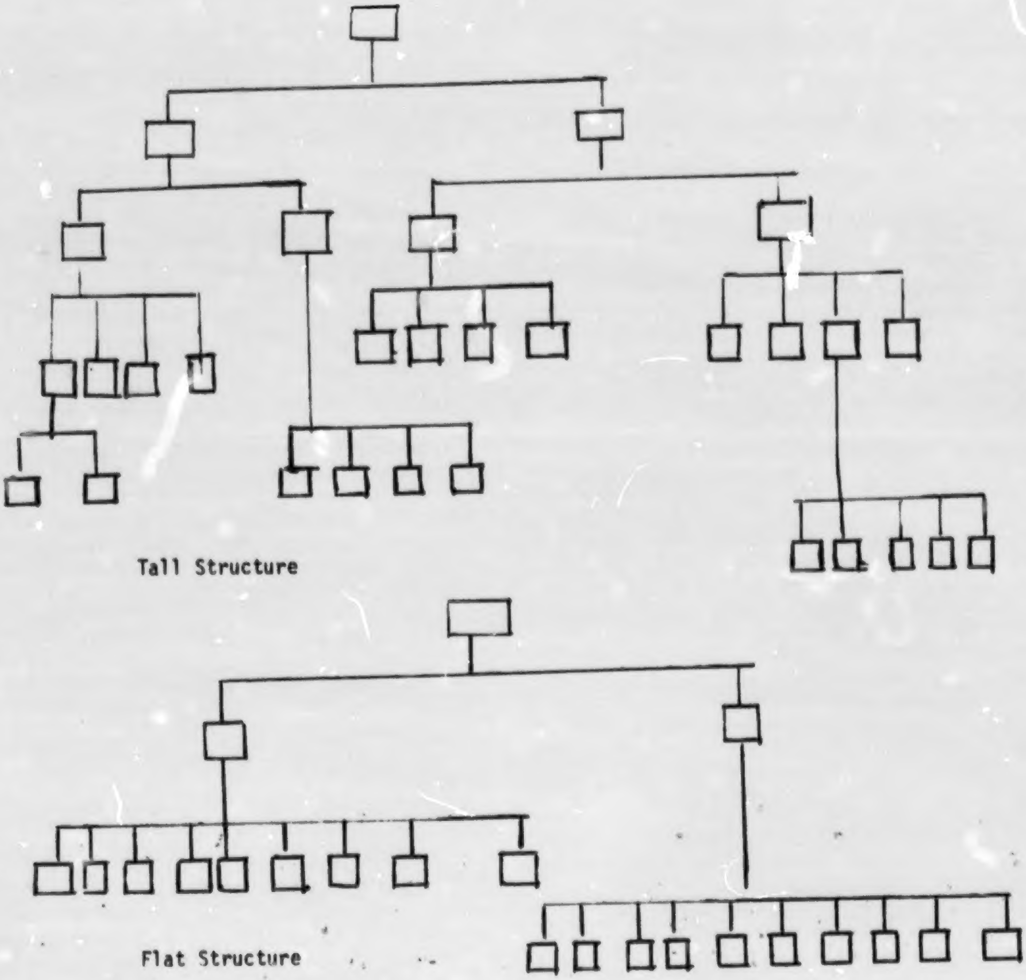
Downey (1963) also felt that a secondary principal should be more concerned with the instructional leadership than with business management functions. A supervisor, as opposed to a pure administrator, gives direction and leadership to a program and to individuals. There should be a two-way flow of communication between the supervisor and the subordinate. A supervisor should facilitate instruction and monitor a program's progress.

Trapped by Administrative Flow Charts

Commonly used types of line and staff charts tend to nourish the growth of administrative practices and diminish the role of supervision. One reason for this occurrence is relatively clear. School district line and staff charts tend to be comparatively flat (See Figure 1). In a tall structure (Figure 1) there is one supervisor for a small number of subordinates. Therefore the span of control of the immediate supervisor is small and the amount of supervisor-subordinate interaction increases. A tall structure is found in many production based organizations. In a flat structure (i.e., school) there is one administrator for a larger number of employees (i.e. 1 principal: 40 teachers). This larger span of control virtually ally guarantees that administration rather than supervision will occur. It is impossible for one person (principal) or two people (principal and vice-principal) to effectively "supervise" a program carried on by forty teachers. The principal may "evaluate" each teacher once or twice each year (which is an administrative task mandated by higher authorities), but this in no way suggests that the principal is aiding in the development and supervision of a program.

Problems in What to Supervise

What is even more disturbing about the lack of supervisory controls is that all too often there is no program for reading in the content areas. In some cases a reading-in-the-content-areas "program" is thought to exist when a small number of faculty utilize various instructional strategies in their respective classes. However, such a "program" has no conceptual basis and no measurable outcomes. Little or no thought has been given to each person's role in fostering the program.



Tall Structure

Flat Structure

Figure 1
ORGANIZATIONAL STRUCTURES

Beyond the building level, another serious problem can arise. A school board, superintendent, or assistant superintendent may be sold on a content reading program because of its economic advantages over other secondary reading alternatives. However, the administrator may not stop to consider that there may be no one in the school district with secondary reading training to help formulate and institute the program. While it is obviously true that content teachers implement the program, they must have someone to turn to for ideas and leadership. Reading supervisors trained and experienced only at the elementary level may not be able to relate to secondary problems and meet the needs of content teachers.

Therefore the problem is multi-faceted. Reading in the content areas has suffered from supervisory neglect and a lack of supervisory controls. The development of conceptually sound content reading programs appears to be lacking. And, many administrators and elementary-trained supervisors may lack the expertise to design and implement the type of program that is needed.

Short- , Middle-, and Long-Range Alternatives

What are the practical alternatives? If a school district wanted to decrease the span of control (making the flat organization somewhat taller to help insure more supervision), there are several avenues that could be followed. The first alternative is to hire more supervisors, reading consultants, and/or vice-principals. This "solution" is likely to be viewed by the public as another attempt to increase the level of bureaucracy. The public would more than likely perceive this step as a one-way road leading directly to higher taxes.

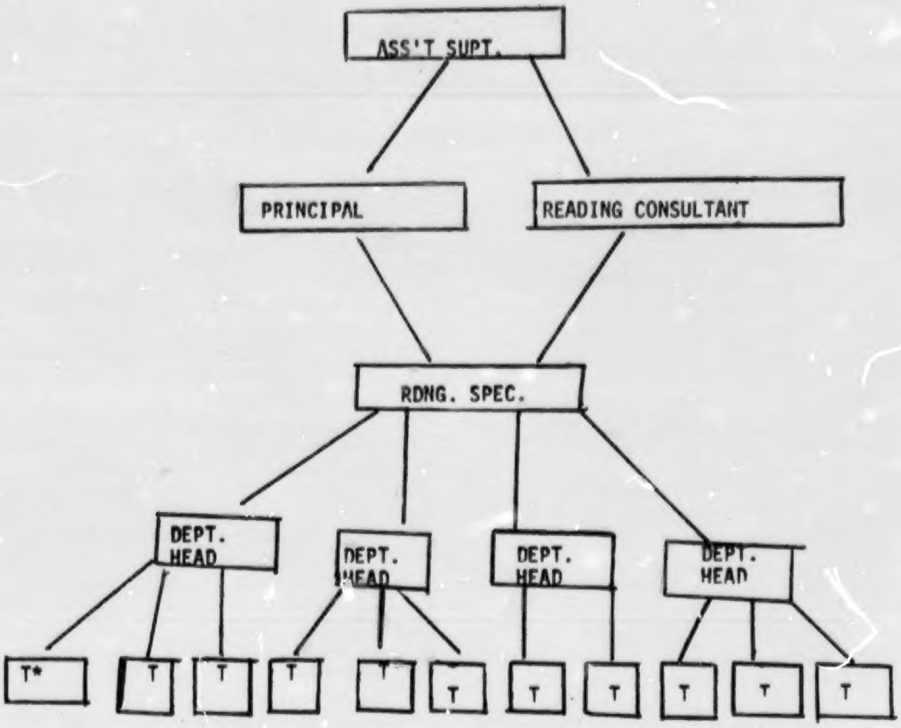
There is a second alternative which may be more acceptable to the public and which may, in the end, serve the students better. It requires a great amount of concentrated effort by a large number individuals and institutions over a protracted period of time. Certain steps could be taken immediately (short-term), while others would take more time to totally implement (middle-and long-range).

Short-and Middle-Range Plans

1. The assistant superintendent for instruction and the secondary principals could form a broad-based committee (classroom teachers from a variety of content areas; librarians; reading specialists; counselors; etc.) to delineate the rationale of a program for reading in the content areas. Participation in this type of committee involves a considerable investment of time for those individuals involved. If these meetings are held after school hours or during the summer, the participants should receive some monetary allotment.

2. The committee should continue to meet as a whole or as subcommittees to develop specific objectives for the learner, for the teachers via a systematic in-service plan, and for the administrators. Once the objectives are agreed upon, the committee could decide upon various instructional strategies to differentiate instruction (i.e., study guides, SQ3R, structured overviews, etc.) and to aid in accomplishing the objectives. A staff development program could be planned to familiarize teachers with these strategies. Finally, the committee could establish methods of individual and program evaluation. The continuous evaluation of the program would serve to modify the objectives when needed.

3. To reduce the span of control and to provide the needed expertise, the assistant superintendent and principals must first use the available staff more effectively. Supervisors/consultants, reading specialists, and department heads could, by working together, complement each other's roles and responsibilities. For example, the consultant may bring new ideas to the school and meet with the principal to develop an implementation plan. The consultant could then oversee the work of the reading specialists, who would be instrumental in training and assisting department heads in practical strategies. The department heads, who should be given a lighter than normal teaching schedule, would then help monitor the program's progress in each department. Thus the flat structure has become increasingly taller, thereby assuring that more supervision can take place. (See Figure 2)


ASS'T SUPT.
PRINCIPAL
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DEPT. HEAD
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T* = TEACHER

Figure 2
MAKING THE STRUCTURE TALLER

Long-Range Plans

The long-range solutions to enhancing reading in the content areas programs and other types of curricular improvements lie with state departments of instruction and colleges and universities. McNinch and Richmond (1977) reported that:

> A majority of course preparation and practicum experiences for office personnel are of a purely administrative nature. This strong emphasis is warranted by certification requirements and further sanctioned by university departments. The emphasis on adminstration is primary, even though logical arguments for a strong curriculum-supervision component appears necessary ... (p. 56).

It may be to everyone's benefit for state departments to require a more comprehensive curricular leadership component for principal certification. The responsibility would then shift to the university to offer courses which are relevant to curriculum theory and development, in-service planning, and program evaluation.

Another point, not often mentioned in the literature, concerns the role of content area department heads (i.e., history, English, math, etc.). The position could, in many instances, be made more attractive by offering department heads a salary index, more curricular responsibility a lighter teaching schedule, and more recognition for achievements. In turn, department heads would be selected on the basis of their expertise as teachers, their peer respect, and on the basis of completed graduate hours in curricular methods courses as well as courses in their teaching field. When department heads are elevated to truly meaningful positions, the span of control shrinks dramatically. The result is greater supervision within each department. The move can benefit a particular content area (i.e., social studies) and prove beneficial to the development and implementation of a reading-in-the-content-areas program. More importantly, it may help to curb the exodus of competent teachers from their content area to administration.

Summary

We have been striving a long time for that seemingly unattainable goal most often represented by the "Every teacher is ... " slogan. Perhaps when there is more administrative and supervisory support from the central office and building principals, from secondary reading consultants, and from department heads, the improvements can be better facilitated. Each person must understand his/her responsibilities in regard to the program. The starting point must come by defining the problem and developing a systematic program complete with an inservice plan and implementation timeline. Then the program should be monitored and evaluated.

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FOSTERING CHANGES IN CONTENT AREA READING: an ADMINISTRATIVE FUNCTION

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Suggesting that teachers implement reading strategies in their social studies, science or math classrooms constitutes a major change for most teachers. When a biology teacher is suddenly faced with ferreting out main ideas and their supporting details, some hesitation on that teacher's part is to be expected. Reading supervisors, principals and other teachers can facilitate secondary teachers unfamiliar with helpful reading strategies. In order to facilitate teacher change, it is necessary for the facilitators to understand the change process itself. This paper serves as a preparatory guide for administrators charged with promoting and maintaining a new change or innovation. It is assumed that the administrator or change agent perceives a need for change, supports it and has a rough idea of the direction in which to proceed.

Three descriptive aspects of the change process are presented, followed by change agent roles that integrate the descriptive aspects and translate the theory into action. The characteristics of the reading innovations and teacher personalities, or potential adopters, are both important factors. To a large extent they determine how well reading assistance programs will be accepted. In addition, the adoption of reading strategies should progress through regular stages which should be facilitated by the trained change agent. The innovations, adoptor personalities and stages of adoption are presented in sequence. It should be remembered that the three areas are interactive and the roles of the change agent facilitate that interaction.

Characteristics of Innovations

The following characteristics are descriptive of innovations. The degree to which a proposed innovation embodies these characteristics will, to a large extent, determine the rate of its adoption (Rogers and Shoemaker, 1971).

1. Relative Advantage. Does the proposed innovation represent a better way of accomplishing a task than the present method? This advantage can be economic, social, or both. If a reading consultant designs a method of implementing reading-study skills into content subjects, the method must work at least as well as that previously used. If the new integration of study skills works much better, the adoption of it is more assured.

2. Compatibility. Does the proposed innovation involve too much deviation from the present circumstances? This characteristic tempers that of relative advantage. In the previous example, if no reading skill strategies were being used by secondary teachers, it would be difficult to institute an organized, systematic approach.

3. Trialability. Can the proposed innovation be segmented enough to allow for a trial run on a limited basis? Ideas that can be implemented on a trial run basis or where only part of the innovation is tried, are less risky and therefore more readily accepted than changes that cannot be segmented. Content teachers might try a single study skill such as main ideas in paragraphs for a specified time limit. The key issue here is the limited trial basis.

4. Complexity. Is the innovation difficult to understand? The more complex an innovation appears, the slower the rate of adoption for it. A simple, easy-to-implement approach to study skills is likely to be accepted more quickly than a multi-level explanation that involves the whole continuum from theory to practice.

5. Observability. Are results from the innovation visible to others? A simple comparison of performance between groups using and groups not using study skills would make the effectiveness of the strategy apparent to the teacher.

6. Cost effectiveness (Zaltman, Duncan and Holbeck, 1973). Is the innovation expensive to implement and maintain? The more expensive an innovation is, the slower the rate of adoption. Initial and continuing costs must be considered. The example of reading study skills being infused into secondary classrooms is still relevant here. When additional materials may be needed, teacher inservice needs to be planned or a consultant is to be paid, the cost of a change becomes a factor.

There are several different explanations of innovation characteristics (Havelock, 1973; Zaltman, et. al., 1973; Rogers and Shoemaker, 1971; Carlson, 1965). For the most part these theories divide similar information into different categories or into categories with different labels. The specific categories are not the crucial issue. The important point is that characteristics of a change affect its adoption. Therefore if change agents (proponents) want innovation adopted, then the innovation should be tailored to the mentioned characteristics.

It should also be noted that combinations of these characteristics can interact and are at times interdependent (trialability/observability, relative advantage/compatibility). Finally, through analyzing the characteristics of innovations, some evaluation regarding the feasibility of the change should emerge. This then is a necessary first step in the change process.

Adoption Stages of Innovations

There is little agreement among researchers about the exact number of stages adoptors undergo in the process of adopting proposed innovations. What is agreed upon, however, is that time is required for adoption and that this time is ordered into a sequence of events rather than random adoption behaviors. Havelock (1973) suggests six stages (or phases) of adoption.

1. Awareness. Individuals are exposed to a proposed innovation. A passive interest is established when the individuals observing the innovation do not seek information. The mode of presentation of the new information, however, may determine later interest. A social studies teacher attending an inservice may become aware of using an associate passage paragraph as an advance organizer with a lesson before teaching the lesson's content (Alvarez, this volume.)

2. Interest. Individuals seek more information about the proposed innovation. This stage is characterized by gathering additional data without making any judgment about the data. As more information is collected, a positive or negative attitude may develop. As the social studies teacher listens to the presentation on associate passages used as advance organizers for reading, she or he may desire more information. When additional information is actively sought, the teacher is no longer a passive listener, but rather an interested participant.

3. Evaluation. The individual mentally tries out the innovation, imagining its impact on a personal situation. This mental trial helps decide whether or not a real world trial would be beneficial. The teacher may imagine the class introduction to the alerting nature of the associated passage or hypothesize how students might use the associated passages with their textbooks.

4. Trial. The individual uses the innovation on a small scale or trial basis to determine if it actually works. The teacher can use a reading selection with associated passages as advanced organizers with a small number of students.

5. Adoption. A judgment is made on the results of the trial, and the individual decides whether or not to use the innovation. The associated passages can be used as part of the regular reading assignments in the social studies textbook.

6. Integration. The use of the adopted innovation becomes routine. The teacher would continue with the use of the associated paragraphs.

There are relationships between characteristics of innovations and the stages of their adoption. If a proposed innovation cannot be segmented (trialability), then a trial stage will be difficult. During an awareness stage, an innovation's complexity, advantages and compatibility must be apparent if the adopter is to move to an interest stage. If advantages are not perceived during the mental trial or the subsequent trial runs, adoption seems unlikely. If after adoption, the innovation is too complex or costly to maintain, integration of that change becomes dubious.

The importance of these stages rests not with their labels or numbers, but with their characteristics and order. Adopters must go through all the stages in the given order. Since individuals differ in their rates of adoption, it is logical to assume that they go through the stages at different rates. It is, therefore, hazardous for adoptors to skip stages, change the order of stages, or hurry through the stages. Change agents' awareness of these stages is necessary for effective facilitation.

Adoptor Categories

Personalities of prospective adoptors also affect the rate of adoption for innovators. Diffusion of innovations is a special instance of communication involving new ideas. Since the information is new, some risk is involved for the receiver of this information. The risk factor causes different behavior than does communication in general. Consequently, different personality types react to innovation in characteristic ways. Based on a bellshaped curve of adoption distributions over a period of time, Rogers and Shoemaker (1971) have identified five adoptor categories. They point out that percentages are approximate and do not define exact subgroups as the curve assigns general characteristics to speed of adoption.

1. Innovators. This group is 2.5% of the population. Innovators are venturesome. They are eager for new ideas and desire risk and daring. They are quick to sort through technical information, and they are able to manage occasional setbacks. Without asking for support or direction, this group would try flexible grouping for social studies assignments, making sure that each group had an independent reader.

2. Early Adopters. This group comprises 13.5% of the distribution of adopters. While more conservative than the innovators, they are still quick to implement new ideas. Early adopters are locally oriented and respectable. They are the purveyors of advice and information about proposed changes. Early adopters make good missionaries for innovations. This group would readily accept suggestions for changes in their social studies teaching style. Since they are not as eccentric as innovators, early adoptors are a good starting place for change agents.

Early Majority. This group comprises 34% of the adopting population. The early majority interacts frequently with peers and produces few leaders. They are characterized by deliberate, careful adoption of change. Once the early majority group sees successful grouping in social studies by early adoptors, they readily adopt it also. With encouragement they follow the early adoptors.

4. Late Majority. The late majority is also 34% of the population. They are a cautious, skeptical group, adopting change only when the majority has done so. They are persuaded by innovation efficacy and peer pressure. The late majority can be convinced of the usefulness of reading groups in social studies. They must be shown the groups work and how well it works.

5. Laggards. This group of 16% of the adoptors is last to accept the innovation. Their frame of reference is the past. Many are isolates. Decisions are made on the basis of what was done in the past. Laggards are naturally suspicious of innovations as their values are usually traditional. Laggards are more difficult to convince. Since they are tradition bound, a new approach to social studies taught in reading groups may not be accepted. Identifying laggards will help the supervisor understand their reluctance.

General characteristics for innovators and nonadopters have been developed by Carlson (1965). Based on his study, it appears that late adoptors (or laggards) and non-adoptors have very similar characteristics. Consequently, a continuum of personalities associated with innovations emerges. At one end are the innovators; at the other end are the non-adoptors. While labeling teachers is risky, the extent to which the change agent identifies and manages different personalities will to a large degree influence the success of the change process. An immediately tangible result of identifying doptor categories is establishing rapport with the early adoptors as a "corps on innovators."

Innovations and Change Agent Roles

As the stages of adoption of innovations are sequential, so are the different roles of change agent. This correspondence is with good reason. Essentially, the change agent facilitates the adoption of the innovation. Consequently, the agent's role or function varies with the needs of the adopting group as they progress through adoption stages. Change agents' success has been positively correlated with 1) the amount of change agent effort; 2) client orientation; 3) program compatibility with clients' needs; 4) agent's empathy with clients; 5) credibility in the eyes of the clients; and 6) efforts to instill client's ability to evaluate innovations (Rogers and Shoemaker, 1971). With the above findings, the roles of the change agent become important. The following are change agent roles.

1. Develops need for change. The change agent functions as a catalyst, causing prospective adoptors to overcome an inherent resistance to change. The clients must be made aware of the change itself and the need they have for adopting the change. The change agent should expose the adoptor to the new idea. Secondary teachers are well aware of students' difficulties with the textbooks in the content areas. Some teachers might not realize the difficulties are reading problems. This fact should be pointed out, along with the specific reading help that content area teachers can provide. Notice there is no attempt to pressure teachers. A need is pointed out and possible alternatives to fill the need are proposed.

2 Establishes a change relationship. If the clients appear receptive and want more information, the change agent moves to the next role, but only for those clients requesting help. During the interest stage, the agent provides additional information and encourages individuals to seek out other information. Secondary teachers that are interested could form groups to discuss the place of reading in their classes and share relevant resources that may have been suggested by the agent. The change agent must establish a rapport with these interested individuals. The agent must have teachers' trust, be empathic to their needs, and be credible in their eyes. Ohterwise, the new ideas will be rejected.

3. Diagnoses the problem. The agent realizes the existing problem from the clients' perspective. In order to guide the progress of interested clients, the agent must understand their needs and why existing alternatives are unsatisfactory. Further, the agent should check his or her perceptions by asking for feedback from the client. The change agent might ask teachers about the evaluation of reading skills being the underlying cause of problems with content textbooks. Then the teachers can agree or disagree.

4. Creates intent to change. At this point, the clients have assimilated the new data and are ready to do something with it. The agent's role in this stage is centered on motivation. The clients evaluation of alternatives is encouraged. Evaluations are not suggested by the change agent as only evaluations by the clients are beneficial. The teachers should be encouraged by the change agent to rank or choose particular strategies.

5. Translate intent into action. After evaluation selects favored alternatives, the change agent helps translate the chosen alternative into a suitable course of action. The client may require training to carry out an intended plan. Support for trials should be provided. The teachers that are ready for a trial could be trained in specific reading/study strategies and supported through a trial run in their classes.

6. Stabilizes change. Once an acceptable change has been carried out by the clients, the change agent must reinforce the change with positive feedback, thereby freezing the new techniques into the client's approach. The change agent helps the individual adjust to the new situation. When teachers implement reading/study strategies into their content subject lessons, they need feedback. The change agent must provide this feedback.

7. Achieves terminal relationship. Eventually the clients should generate their own change impetus and management. Until this is evident, the change agent must nurture the adopted innovation through continued contact with the clients. The secondary teachers that have adopted reading help for their students must be reminded how beneficial it is for their students, either through continued communication or as change agents themselves.

A final point on roles of the change agent is in order. These roles are not mutually exclusive. Though there is an order, the stages of adoption are mixed together, so the change agent's roles that facilitate client progression through stages must be mixed. A change agent may be functioning in several different roles for a single client. Further, if all clients are not in the same stage of adoption, as they surely will not be, the change agent's role is made even more complex. There is no easy way out of this complex juggling act. However, being aware of its existence helps. With so many possible adopter categories, stages and roles, one should seek the best approach.

Suggesting reading strategies for content area teachers can involve a major change for some teachers. The administrator or change agent responsible for implementing reading help in secondary content classes would do well to consider the problem in terms of change theory. The change agent should 1) analyze the request for reading help in terms of characteristics that affect its adoption, 2) analyze teacher personalities as they relate to adoption of the change, 3) be aware of the stages of adoption and where this change is in the sequence, 4) translate these analyses (1-3) into a plan of action as a change agent.

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ROLE OF AN EXTENDED LEARNING CENTER IN IMPLEMENTING CONTENT AREA READING IN SECONDARY SCHOOLS

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Although teachers realize that students need improved reading skills for success in academic subjects, high schools have not traditionally provided for instruction in reading. Recognizing this to be a local as well as national problem, Teacher Corps of Youngstown State University, Youngstown, Ohio, developed and implemented the Center for Extended Learning. The CEL was designed to facilitate student participation in a senior high reading program for the development and improvement of reading skills as well as to provide teachers with an opportunity to develop and participate in an intensive fieldbased inservice experience.

Selected as the target portal school for the Center for Extended Learning was North High, an inner-city high school of 560 students. Results of the Ohio Survey Test 1976 indicated that between 55 and 65 percent of students at North High School were reading below average (stanines 7, 8, and 9). This compares unfavorably with a state average of 23 percent in the three lowest stanines.

Reading Program in CEL

A comprehensive reading program was developed utilizing the Random House High Intensity System/Reading as a foundation. This program was designed to accommodate all students in the high school from the non-reader to the advanced reader in grades 9 - 12. High Intensity Reading contributed a management system with materials from more than 50 publishers coded into the appropriate levels of the system. A global pretest placed students into one of five broad levels; specific pretests, and later posttests, assessed individual objectives at the appropriate level in four general categories--word study, vocabulary, comprehension and study skills.

Progress within the prescribed work was monitored by the students. When a student had completed all work within a prescription and recorded the results of his/her work, a posttest was arranged. Successful completion of the posttest resulted in new assignments for the same objective. Free and structured reading activities were monitored by book conferences with CEL staff and discussions with other students. Evaluation of the effectiveness of the CEL's reading program was based on standardized reading comprehension and vocabulary tests, reading attitude and general school attitude inventories, and anecdotal records. Instruments were administered in September and again in May.

Evaluation of students' progress was limited to a comparison of current growth in reading level with past growth as measured by standardized tests and intended for report at the end of the program.

Certain modifications were made early in the CEL reading program. A number of students were misplaced and early specific pretests yielded little valuable information. This was due primarily to the fact that some students achieved low reading scores not because they were unable to read but because speed of reading was slow. For these students, low level prescriptions in the general areas of word study and vocabulary were inappropriate.

It was also found that although the High Intensity System provided a great deal of material which was high interest-low reading level, there was a lack of high interest medium and high reading level materials. Attempts were made to improve these problems in two ways:

1. Large numbers of paperbacks were selected with assistance from teachers and students, and purchased from a local distributor. These were supplemented with magazines and local newspapers.
2. Developmental materials were constructed and adapted for use with average and above average readers.

Special attention was provided to developing materials for reading in the content areas.

Motivation provided a final problem; some students did not perceive the program in a serious manner, and thereby a grading system throughout the program was necessitated. The system--based on books read, work on prescriptions and structured assignments--did not place a premium on current achievement, but rather on work and progress. Growth in reading level took the place of a final exam.

About 550 students, including those with learning difficulties, participated in the CEL each week. Each North High School student spent from 1 to 10 periods per week in the CEL with participation determined by the individual's class schedule and desire for additional involvement rather than by need.

The CEL served from as few as 2 or 3 to as many as 81 students in a given period with an average of more than 300 each day. Staffed with reading specialists, the team leader, intern teachers, paraprofessionals and student aids, the Center for Extended Learning provided training also for preservice teachers and was a laboratory in which to fieldtest secondary reading materials.

Several aspects of the CEL reading program set it apart from others:

1. The program was comprehensive, developmental and secondary. It took each student in a senior high school from where (s)he was, to as far as (s)he could go.
2. There was no stigma attached to the Center for Extended Learning, since all students attended and participated.
3. The reading did not replace the English program for any student.
4. The reading program was credit-bearing; students received from 1/4 to 1 credit depending upon the number of periods spend per week in the reading center.

These features, as well as the general design of a senior high school reading program, are persuading the Youngstown Public Schools to incorporate CEL's into other high schools.

In-Service in CEL

The CEL inservice component was designed in response to both local and more general appraisals of past in-service activities. Often such activities do not meet perceived needs of the teachers, are one-shot activities with no follow-up, take place away from the school site outside of school hours, and are not accompanied by materials, supplies or support services.

In developing the CEL inservice component, an attempt was made to provide for the activities which have none of the aforementioned characteristics. Agreement was reached with teachers in English, foreign language, math, science, and social studies, that if students' reading skills were improved, the teachers could teach as much material as they normally did but in less time. Each of the courses in these five areas was to be taught four times per week rather than five. The fifth period would be spent by both students and teachers in the CEL.

Specifically, social studies classes did not meet on Mondays. Any student who normally had a social studies class on Mondays went instead to the CEL to participate in the reading program; (s)he went only during the social studies period. However, as a result, every student who took social studies went to the CEL during on period on Mondays throughout the year. This freed all social studies teachers to participate in inservice activities every Monday, all day, throughout the year; similarly for students and teachers of English (Tuesdays), foreign language (Wednesdays), math (Thursdays), and science (Fridays).

At the years's beginning, teachers were charged with designing and performing their own inservice activities. It was suggested that a self-study document be employed as one source for identifying possible inservice activities. Teachers were also advised to spend time learning how to reinforce in their classes the reading skills acquired by their students in CEL.

A small room with chairs, tables, bookshelves, and file drawers was set aside for the teachers participating in inservice. The room was stocked with supplies and catalogs from several hundred publishers of print and non-print materials. In addition, memberships with the appropriate professional organizations was established for the CEL. The resulting journals and other publications remain housed in the CEL. Three university and school faculty acted as consultants to the teachers on curriculum matters and were present at the school on appropriate days.

Activities planned and/or completed included visits to other schools in and around Youngstown, research at the university library and curriculum center, development of a math lab, development of a prelanguage course of study, and development of an outdoor education course. To assist teachers in completing curriculum projects, a sum of money was set aside to fund competitive mini-grants. These grants provided for supplies and area travel over and above normal. Programs as identified by the Board of Education of the Teacher Corps Project in general were to be awarded to individuals or small groups of teachers for novel ideas.

When it became apparent that the staff were not effectively taking advantage of such planning time, a new plan was presented to place more direction in the hands of the school staff, while at the same time, a transition program was being planned to insure the survival of the Center for Extended Learning beyond Teacher Corps' tenure in the building.

The impact of the Center for Extended Learning on both students and teachers was great. Activities of the Center affected the daily schedule of teachers and students. Effects were even felt at the Central Office where rescheduling was done and revised credits for students were computed. It was the general opinion of most of those involved that the program was highly effective for students. The program for teachers was limited.

The Youngstown Public School System is planning for the continuation of the Center for Extended Learning. A full-time reading specialist and one aide have been requested. This represents a necessary redirection in the scope of the CEL but it is a great improvement over the prior condition in which no reading instruction was available at the portal school.

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ORGANIZING AND OPERATING
an
ALL-SCHOOL READING PROGRAM

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A major responsibility of every school system is to provide the best possible reading instruction at all levels to the pupils. To accomplish this, the concerted effort of all school personnel is required under the leadership of the administrative officers. As a program is contemplated, various considerations must be examined and studied. First, the nature of the reading process must be looked into. How the school personnel perceives the process will determine the structure of the program. In short, the school personnel need to evolve a guiding philosophical base. Next, the parts of the program need to be delineated. Is the program to be merely remedial or just in the elementary grades or will all pupils at all levels be recipients of its provisions? Then, plans for implementing the program must be carefully constructed. This would involve determining the role of various personnel and the setting up of a committee to be in charge of the implementation and operation of the program.

A Basic Philosophy

A viable philosophical base develops from an investigation into the reading process itself. At first, the process should be reduced to its simplest form. We are dealing with a process - a skill subject. Reading is not content but a skill used to acquire content. Therefore, two basic prongs must be evident in an all-school program: instruction and practice. All pupils must receive systematic and continual instruction in reading as it pertains to all subjects and at all levels of school, from kindergarten through grade twelve. Instruction is consolidated through the equally important prong of wide reading. Every effort must be made to foster and make possible extensive reading by the pupils.

Though I have implied the need for reading instruction to the superior as well as the average and the remedial reader by the term "all pupils," I wish here to underscore the implication for an all school program that provides equally for the superior pupil and remedial pupil. Such a consideration is inherent in a basic philosophy.

Most reading programs today embrace the developmental philosophy. I am noting philosophy here of a developmental nature, not developmental as opposed to remedial that designate parts of a program. The developmentalphilosophy is essentially the commitment to teach each pupil at the level on which he is operating successfully and to take him/her to the highest level possible commensurate with his/her rate and stage of development.

Essential Parts of a Program

An all-school program may consist of five interrelated parts. One is provision for systematic instruction in the skills of effective reading. In the elementary school such is accomplished by a daily class called reading, and it may consist either singly or as a combination of basal readers, the individualized approach, a language experience approach, or whatever. I see at the high school level, elective courses open to pupils who wish to sharpen their skills. For instance, such courses often prove popular with high school juniors and seniors who are planning to attend college. A second part would be the establishing of supplementary libraries in each classroom. Books must be readily available to the pupils in a ratio of three to five per pupil. These libraries consist of single or dual copies of various textbooks, reference materials, and trade books related to the topics under study. Of course, the books should be on varying levels. For instance, a seventh grade science class would have books ranging from around third grade to twelfth grade level to provide for the heterogeneity found in most classes. The third and very important part of the program is the fusion of reading instruction with content in each subject area. This is very necessary in the high school, but it must begin in the elementary school. A fourth part is the use of the central school library. In all classes and at all levels instruction must be so planned so that pupils are given practice. Finally, the fifth part is provision for the remedial student who needs additional instruction so that he/she gets in the regular class.

In reviewing these five parts, two important considerations for implementation of the program are apparent. One is that both instruction and provision for practice through reading widely are provided. The other notes that reading is taught whenever the pupil has printed material before him to read.

Planning the Program

Once a basic philosophy has been determined as well as its overall scope, the educators of a school or district will need to turn their attention to the specifics of practice under their philosophic guidelines and the involvement of personnel. To consider and evolve the structure of the program, a Reading Committee is often a valid approach. Persons on the committee will study and discuss, in light of their specific local school situation, plans and considerations to culminate in a blueprint, as it were, to be then presented and discussed by the entire faculties.

The personnel comprising the committee should be as representative of the total educational community as possible. Administration must be represented even if it is in an ex-officio capacity. It is essential that the administrative officers view their participation very seriously irrespective of their other administrative duties. The curriculum coordinator and the reading teacher(s) are participants. Then, of great importance is the participation of teachers; a representative from each major level (primary, intermediate, high school) and from each content area. It would also be wise to involve a representative of one or two parents for their input as well as for community communication.

The committee will function most effectively with administrative officers insuring that:

1. there is active teacher involvement,
2. the program is not "handed down" by fiat from the administrators,
3. there is open communication between the committee and all educational personnel,
4. there is an adequate budget for materials and the working of the committee,
5. there are provisions set up for the in-service training of teachers as necessary and,
6. there is communication to the school community.

The committee may start with a delineation of the need for a comprehensive program. This may well grow out of the results of school-wide testing or community and/or teacher expressed view. Then, it would be necessary to arrive at a statement of practical philosophic points. These may include the following:

1. The program needs to be comprehensive. The specific scope of the comprehensiveness will need to be determined.

2. Identifiable goals must be determined. These may be in the nature of short range goals of what can be implemented immediately such as a review of the function of the reading teachers or a consideration of new materials and of long-range goals which would take effect gradually as the program structure is fully implemented. The goals may be fully or in part in the form of cognitive and affective behavioral objectives.

3. As interrelationship between reading and the other aspects of the language arts must be studied. Essentially the reading program is aiming toward greater independence by the student in his usage of language.

4. Ways in which the instruction in reading will be made to be continuous and systematic from kindergarten through grade twelve.

5. Reading is to be regarded as a process rather than as a subject. It is essential that instruction in reading be incorporated into the total school curriculum. It must not be isolated into special reading classes with little if any relationship to the school curriculum.

More specifically the committee will need to determine how the program will:

1. provide for both instruction and application,
2. emphasize meaning,
3. teach the skills needed by the pupils,
4. adapt to pupil individuality and need,
5. continuously diagnose and evaluate to insure flexibility and pertinence,
6. investigate the materials needed for instruction,
7. suggest basic lesson procedures, and
8. plan for information to the community.

Obviously all school personnel should be involved. Reading is a basic tool which, by tradition, is a prime responsibility of the school toward the pupils. But, the committee will need to ascertain the role of each catagory of personnel and ways to implement the role. Therefore, the involvement in the program of such personnel as the classroom teacher, the school principal, the curriculum director/coordinator, the reading consultant/teacher, the guidance counselor, the librarian and or media specialist as well as the school nurse must be investigated. Adequate communication between each of these personnel and the committee must be maintained to insure the needed consensus.

Operating the Program

Very likely, the success of operation will be very dependent upon the guidance and leadership given to the personnel of the school. This guidance may be provided by the reading consultant and/or teacher. However, if such personnel are assigned to full-time remedial teaching, little guidance will be possible because of the time factor. Certainly, there will need to be provision for in-service course(s) since there will be likely a number of teachers with a minimal background in the teaching of reading. Also, a successful program provides for daily guidance with the consultant free to meet with teachers during the day during their preparation period either individually or in small groups. At these meetings specifics of the current lesson procedures could be worked out with the consideration of a "real" class of pupils. Such is very practical help which teachers welcome.

The type of individual guidance suggested here is slow but it is thorough. The characteristic of any viable operation is the motivation of the classroom teachers. Meeting successively with a teacher tends to safeguard the teacher's participation to the extent that the fusion of reading instruction with continual classroom instruction becomes intrinsic. As a pupil should learn word recognition techniques and study skills to the extend that he does not have to "think" about the skill but can concentrate on meaning, so it is with the teacher. The teaching of reading should be inextricately interwoven in all classroom procedure.

An all school program could very well take four to five years to fully implement, especially if a consultant works with teachers individually. In the beginning the consultant should limit him/herself to those who are the most interested and the least threatened. As these teachers succeed the momentum is started toward working with the other teachers.

Specific steps in operating a program are difficult to itemize since schools are school districts differ. But, the administrators of one successful program made sure that each teacher was given personal guidance and they were willing to take the time to do this. The program started with a selected group of interested teachers who met with a consultant for three short workshop sessions. The first session was devoted to identifying goals called behavioral objectives of specific skills that were to be taught during the year. An indication of the skills to be included was determined by the basic nature of the subject area as well as the deficiencies the teachers had noticed with the pupils in their classes. The second session was devoted to construction an informal reading inventory for diagnostic classroom use which the teachers administered to their classes subsequently. The third session explained in detail basic reading lesson procedure.

Upon the completion of the workshop sessions, the consultant then spent several days spaced throughout the year meeting with the teachers. At first, the results of the informal inventory were discussed and those skills found to be most troublesome to the pupils were the ones on which the teacher began. The consultant and the teacher evolved lesson procedure and techniques. In subsequent sessions, further procedures, techniques and needs were discussed. A fundamental principle of the program was that assistance to the teachers developed from general sessions to the specific individual ones. As might be expected, the individual sessions were each different, depending upon the teacher's needs, level of expertise and the class needs the teacher was teaching.

In conclusion, I should like to emphasize fundamental considerations of organizing and operating an all-school reading program. I shall note only four. The first is to have the involvement of the teachers from the beginning under strong democratic-administrative leadership. Next, there must be open communication among the administrators, faculty, students, and parents. Then, provide specific help to each teacher as he/she incorporates reading instruction in his/her teaching. And, finally, be patient. Realize that effectiveness lies in thoroughness. The program can be implemented only as fast as the various personnel involved are able to change. Increased competency of the pupils in language usage is well worth thoroughness in planning and implementation.